consumer reports

SEPTEMBER 1947

FACTS YOU NEED BEFORE YOU BUY

FM for $30

—the break in the FM logjam

A REPORT ON THE NEW PILOTUNER AND AN ANALYSIS OF ITS SIGNIFICANCE

Portable washers

New housing materials

Small dishwashers

Hand cleaners

Food parcels for Europe

Home movie screens

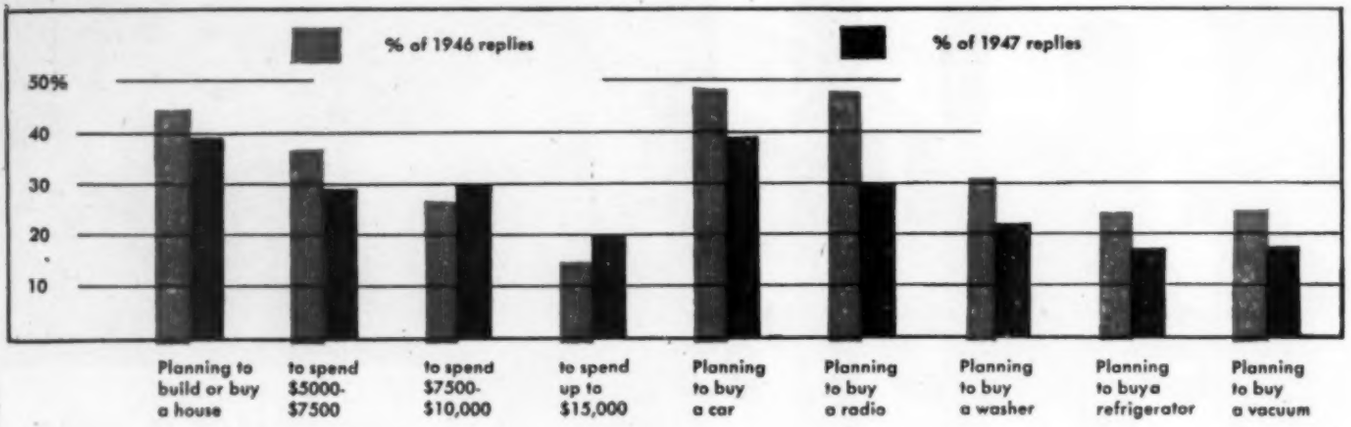
The polio season

Fleischmann's Yeast

Modern furniture

YOUR HEALTH · YOUR HOME · YOUR CAR
BREAD & BUTTER · GOVERNMENT ACTIONS
MOVIE POLL · RECORDS · GARDENING

PUBLISHED MONTHLY BY CONSUMERS UNION



Who are CU's subscribers?

The returns from CU's Annual Questionnaire are in, results have been tabulated, and the CU Board of Directors and staff now know more than they did about CU's subscribers. Since some of the questions were very similar to those asked in 1946, we have been able to note a trend here and there. In all, about 45,000 subscribers filled in the questions.

Where do CU subscribers live?

There are CU subscribers in every state of the Union; 35% of those answering the questionnaire live in New England and the Middle Atlantic States, 30% in the Midwest, 18% on the West Coast, 9% in the South and 7% in the Southwest. In addition, CU has subscribers in eleven European countries, in 15 countries in this hemisphere, and in other such faraway spots as Siam, Palestine, China, and India.

Most of those who answered the questionnaire are city folk: about 50% live in cities of more than 100,000 population; 11% live in communities of 2500 or less.

How do they live?

As for living arrangements, 61% live in houses, 30% in apartments or rooms, and the rest share living quarters where they can find them. Forty-nine percent own their own homes. And 25% of the 1947 respondents tell us that they find their present quarters seriously unsatisfactory.

Last year's respondents were considerably more optimistic about future plans for building or buying a house. In 1946, 49% answered that they expected to buy or build within the next few years. Perhaps some of them have done so, or perhaps they have become discouraged by high building costs. At any rate, only 39% of the 1947 respondents expect to buy or to build soon.

The indications are that this group is becoming disillusioned about how much buying or building would cost them, however. In 1946, 38% felt they'd be willing to spend between $5000 and $7500, while 27% were willing to go as high as $7500 to $10,000. This year, only 29% expect to get a house for between $5000 and $7500, and 30% feel that it would cost them between $7500 and $10,000. Last year, 15% set their ceiling at $15,000; this year, 20% expect to have to go that high.

The number of people who answered "Don't know," or "Depends on circumstances" to this question, jumped from 16% in 1946 to 25% in 1947.

What do they plan to buy?

When asked about the products they planned to buy during the following year, the 1946 answers indicated first an interest in an automobile — 51% said they wanted a car. Fifty percent planned to buy a radio, 32% planned to get a washing machine, 25% were in the market for refrigerators and vacuum cleaners.

When asked in this year's questionnaire about products they had actually purchased in the past year, only 21% of the 1947 group had already bought a car; nearly 39% are still planning to do so. Nearly 29% bought radios last year, but 30% still want them. Sixteen per cent bought washing machines during the last twelve months; 22% are still in the market. Thirteen percent bought refrigerators, 17% bought vacuum cleaners, and 17% are still waiting to buy both of these items.

The product purchased by the largest number of questionnaire answerers (34%) during the past year turned out to be a pressure cooker. And 14% are still planning to buy one this year.

What is their income?

It was found that about 41% of the CU subscribers answering the 1947 questionnaire expected their 1947 income to be between $3000 and $5000. About 19% expected it to be below $3000, and 21% between $5000

Continued on page 369

consumer reports

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Product ratings represent the best judgment of staff technicians or of consultants in university, government, and private laboratories. Test samples are purchased on the open market by CU's shoppers. Ratings are based on laboratory tests, controlled use tests, authoritative opinion, experience of a large number of persons, or a combination of these factors. Interpretation even of test findings is a matter on which expert opinion may differ. It is CU's pledge that opinions affecting its ratings shall be as free from bias as it is possible to make them.

Letters from CU Readers

Dear CU:

We have been subscribers to your publications for some time, and although we regularly receive many other publications, *Consumer Reports* are the ones most eagerly awaited. We are consulted almost daily by friends regarding the rating of articles, ranging from Cosmetics and Ball Pens to Automobiles. One publisher here has intimated that he would like to reprint articles from the *Reports*, which have a topical interest to readers in this country.

Auckland, New Zealand

• • •

Dear CU:

The National Industrial Bulletin is a monthly journal devoted to advocating the development of South African industries in the interest of management, labour and the consuming public.

Since extensive export of all manner of American goods into the Union of South Africa takes place, we believe that the material contained in your monthly *Reports* and annual Buying Guide would be of great interest and value to South African consumers.

We would therefore like to come to an arrangement with you whereby we might secure the right to republish suitable material from your publication from time to time. . . .

Johannesburg, South Africa

• • •

Dear CU:

The Association of Airways Radio Engineers and Technicans is an organization of the Radio Technical Personnel of the Civil Aeronautics Administration. The purpose of the organization is to assist the members in attaining a higher degree of professional efficiency by the exchange and dissemination of technical and other related information. To achieve this end, the Association publishes the *Airways Radio Journal*.

One of our aims is to point out various safety measures that our members can employ on their jobs. In the *Reports* you carried a very interesting and informative article on Automobile Jacks. Since practically all of our members are required to drive Government vehicles in the course of their duties, the section of your article under

Continued on page 369

Use Your Guide

CU's *Buying Guide* is no bookshelf ornament. Make it work. In this space we will remind you now and then of timely material in your 1947 *Guide*.

It's September; going-back-to-school time is here again, and cool weather is coming. Check your* Buying Guide *for information on:

FOUNTAIN PENS.....page 340

OIL BURNERS.....page 328

PEANUT BUTTER.....page 95

PORTABLE TYPEWRITERS.....page 368

WOOL BLANKETS.....page 249

AUTO BATTERIES.....page 338

Reports in Progress

Work on the following reports, among others, is now under way. They will appear in forthcoming issues:

children's shoes
electric blankets
table radios
new cameras

electric coffee makers
automatic washing machines
cigarette lighters
auto seat covers

electric room heaters
pancake, biscuit flours
breakfast cereals
water softeners

▶ *The following developments and actions have been cited in recent reports issued by the Federal Trade Commission, the Food & Drug Administration, and the United States Department of Justice.*

...for the PEOPLE

Raleigh cigarettes

Brown & Williamson Tobacco Corp. has agreed to stop advertising that *Raleigh* cigarettes are "right for the throat." The corporation also agreed to discontinue making any statement to the effect that *Raleighs* have been especially adapted so that their smoke is beneficial to the throat, or less harmful than smoke from other cigarettes.

Wayward bus lines

The Los Angeles Federal Grand Jury returned an indictment charging seven individuals and nine corporations with conspiracy to restrain and monopolize trade in the sale of busses, tires, tubes, and petroleum products to a nation-wide combine of city bus lines controlled by National City Lines, Inc.

Named as defendants were: National City Lines, Inc., American City Lines, Inc., Pacific City Lines, Inc., Standard Oil Co. of California, Federal Engineering Corp., Phillips Petroleum Co., General Motors Corp., Firestone Tire & Rubber Co., Mack Manufacturing Corp.

The indictment charges that the defendants furnished capital to National and to its subsidiaries, American and Pacific, for the purpose of securing control of local transportation systems. In return, National, American and Pacific agreed to give their bus business to General Motors and Mack; their petroleum business to Standard and Phillips, and their tire and tube business to Firestone. The indictment alleges that this division of business was made in arbitrary and noncompetitive manner, and that the prices charged for the products were noncompetitive prices.

In commenting on the indictment, Attorney General Tom C. Clark stated: "This case is important because the public would ultimately bear the costs resulting from the elimination of competition. . . ."

A civil complaint, filed after return of the indictment, requests an injunction against continuance of the practices and cancellation of the supply contracts. To restore competition, the complaint asks the court to direct local transportation companies controlled by National to purchase supplies by competitive bidding.

Cosmetic clean-up

Representatives of the cosmetic and toilet preparation industries were recently invited by FTC to cooperate in the formulation and establishment of trade practice rules — an invitation, incidentally, that has to be issued all too frequently to this and other industries. At a meeting called by the Government to prevent competitive practices which are discriminatory, deceptive, or otherwise illegal or harmful to the industry, trade, or public, the following malpractices, among others, were brought up for consideration: Unlawful discrimination in price, advertising and promotional allowances, services or facilities; improper use of demonstrators, subsidized retail salespersons and "push money;" commercial bribery; fictitious pricing; false advertising.

After suggestions have been studied, a draft of proposed trade practice rules will be written and made available to those interested. A public hearing will then be called at which both industry and consumers may submit suggestions. Finally, the Federal Trade Commission will promulgate the approved rules.

First National Stores

Flour stored by the First National Stores, Inc., in East Hartford, Conn., was found to contain urine stains, rodent excreta, beetles and larvae. F&DA claimed that the flour had become contaminated as a result of unsanitary storage conditions.

Londonderry Bakers

Fruit cake labeled, *Londonderry Rum & Brandy English Type Fruit Cake . . . Baked in the U. S. A. by Londonderry Bakers Ltd. . . . Brooklyn, N. Y.*, contains little, if any, rum or brandy, although the label says: "Ingredients . . . Rum and Brandy."

F&DA claimed the label to be false and misleading, and, since no claimant appeared, the cakes were ordered delivered to a charitable institution.

Sears, Roebuck & Co.

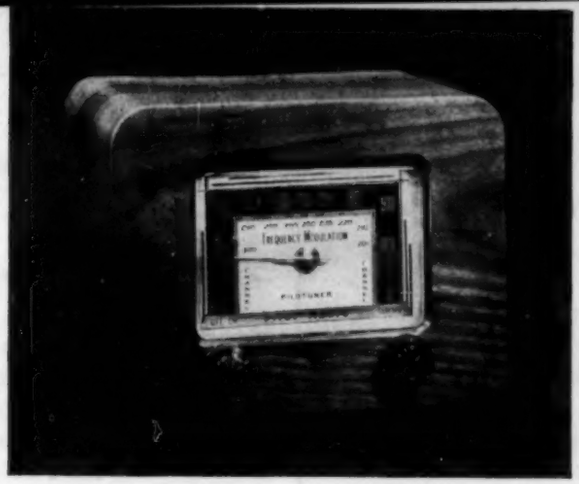
Pecans labeled, *Sears, Roebuck & Co. Fancy Georgia Pecans* were found to contain a decomposed substance and were unfit for use as food. Since no claimant appeared, the court ordered that the nuts be destroyed.

Armour & Co.

F&DA brought charges against Armour & Co. because its *Mayflower Vegetable Oleomargarine* contained less fat than is required by law. Furthermore, the statement on the label, "Vegetable Fats 80.50 percent," was found to be untrue. The company was fined $250.

Not-so-white tuna

Premier Tuna Fish White Meat, a popular brand of tuna distributed by Francis H. Leggett & Co. was found to be adulterated. F&DA charged that the fish, packed by the Sun Harbor Packing Co., had been prepared under such unsanitary conditions that it became contaminated. The Sun Harbor Packing Co. entered a plea of *nolo contendere* and was fined $1500.



As the first reasonably priced device for bringing FM to any radio, the *Pilotuner* is helping to pave the way for the opening up of the whole FM field

FM for $30

July, 1947, will be remembered in radio history as the month in which the FM log jam was broken by the Pilot Radio Corporation of Long Island City, New York. Its *Pilotuner*, at $29.95, is not an FM receiver, but a tuning instrument for procuring FM reception through your present standard AM receiver. Its successful marketing this fall, and the probability that other companies will quickly fall in line with low-priced FM models as good or better, has brought as much joy to FM broadcasters and enthusiasts as any development since Major Edwin H. Armstrong, professor of electrical engineering at Columbia University, applied for his first FM patents in 1932.

The *Pilotuner* is not a perfect device. Its sensitivity could be improved; and the quality of what you hear depends in considerable part on the quality of the AM receiver to which you attach it — though almost any receiver will give better FM reception with a *Pilotuner* than AM reception without.

Far more than just another nice gadget, the *Pilotuner*, in fact, helps clear the way for a new system of broadcasting, which potentially at least can free American listeners from their thralldom to the singing commercial, the soap opera, and the horror thrillers broadcast during the "children's hours." After a prolonged winter of FM discontent, it is arousing once more the spring time hopes of FM's proponents. At $29.95, popular FM is no longer "just around the corner." The *Pilotuner* and the other models sure to follow in its wake make possible, in the immediate future, the development of a mass audience for the thousand new FM stations now planned, under construction, or already on the air.

How FM has been delayed

For 15 years the entrenched AM broadcasters, many receiver manufacturers, and at times the Federal Communications Commission have gone far out of their way to delay the introduction of FM as a practical rival to standard AM broadcasting.

Shortly after FM's birth in 1932, the powerful Radio Corporation of America (RCA) took Major Armstrong's infant under its wing. Early FM experiments were conducted by Major Armstrong jointly with RCA engineers from an aerie atop the Empire State Building. There the same programs were broadcast simultaneously via AM and FM, and by 1934, as Major Armstrong puts it:

OTHER LOW-COST FM DEVICES

While the Pilotuner, reported on above, has stolen a march on the competition with prompt production and promotion, other FM models priced under $60 are slated for fall introduction, according to trade talk. For example:

An Electronics, Inc. "Combinette" at $56.95; this is a table model FM receiver designed also to be used as an FM tuner attached to your regular AM receiver, if you've got a better than average one.—A Transvision, Inc., kit, containing parts from which you can assemble an FM tuner, at $14.75.—A Sonora FM receiver, tentatively priced at $59.95.—An Approved Electronics Institute Corp. FM tuner at $59.95.—A two-tube FM tuner built by Effem Radio Products Co. at $19.95.

A "blooper" kit for making at home a one-tube or two-tube regenerative FM tuner is being promoted by FM stations WIBW in Topeka and KOAD in Omaha; kits are available to FM stations in lots of 1000 only at $8.90 per kit.

A circuit has been made available by Hazeltine to some 140 receiver manufacturers using Hazeltine patents, said to make possible the addition of an FM band to AM receivers, by manufacturers, at a cost of "a few dollars."

CU will report on developments along these lines in future issues.

"The margin of superiority of the FM system over AM . . . was so great that it was at once obvious that comparisons of the two were principally of academic interest."

Yet, despite incontrovertible proof of FM's advantages, RCA in 1935 requested Major Armstrong to remove his FM equipment, and thereafter maintained an attitude of hostile aloofness, tempered only by sufficient FM research to assure that if FM succeeded, RCA would not be left out in the cold. FM constituted a threat to the specially privileged AM position of RCA's wholly owned broadcasting subsidiary, the National Broadcasting Company (NBC); and since 1935 FM has had to struggle along on its own, with many weak friends and a few powerful enemies.

Where the FCC comes in

The Federal Communications Commission was similarly unfriendly during the early years of FM, at one time even refusing Major Armstrong an experimental license which would enable him to complete his field tests. When James Lawrence Fly became chairman of the FCC in the fall of 1939, however, the official attitude changed. Promotion of FM became first order of business on the Fly agenda, and that has been the announced policy of the FCC ever since.

Nevertheless, there are those — and Major Armstrong is among them — who insist that a major cause of delayed FM development was the FCC's 1946 decision, after Fly's departure, to "move" FM from the 45 mc. region of the spectrum to the 100 mc. region where it is now located. The move was made by the Commission on the basis of evidence that intolerable interference might result if FM were kept in the 45 mc. region. The engineering considerations involved are highly complex, and turn in part on what's going to happen to radio reception during the next few years of heightened sunspot activity. The Commission, anticipating the worst, explained that it was moving FM for its own good.

Whether or not its forebodings were warranted, the move unquestionably delayed FM somewhat. While the lack of FM *receivers* at this late date can hardly be laid at the door of the FCC, Major Armstrong insists that the adverse effects of the FCC move can still be felt in the lack of high-power FM *transmitters*, which are difficult to design for the new 100 mc. band. All but a handful of FM stations now on the air are using only a fraction of their authorized power, as a result of which the quality of FM reception today is in most areas inferior to the quality which will ultimately be achieved.

The reasons for the enmity of powerful standard broadcast interests to FM lies in the nature of present-day broadcasting. The 1500 AM stations now on the air vary from powerful, fulltime, 50,000-watt stations to weak, 250-watt local stations. Many of the 50,000 watters occupy "clear channels," that is, each station is given exclusive use of its own channel after sundown, enabling it to reach out a thousand miles or more in all directions, free of interference. Many of these clear-channel stations are owned outright by the major networks; all but one of them are closely affiliated by contract with the networks. The low-powered stations, in contrast, serve smaller areas with inferior signals, and are crowded as many as 100 to a single channel; after sundown some must remain silent altogether while others have to contend with enjoyment-destroying interference from other stations on the same channel. As a result, no matter how meritorious their programming, the underprivileged, independent stations cannot hope for more than a fraction of the audience and success of the powerful network stations.

FM will, or at least can, change all that. Under wisely drawn provisions of the FCC rules for FM, all of

Tests show the Pilotuner *to be a "Best Buy."*

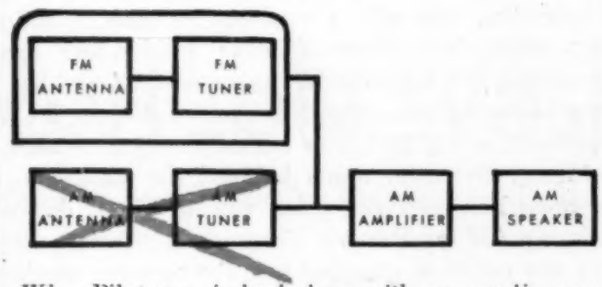
Pilotuners are now available in retail radio stores all over the country, according to the manufacturer. Proof that the consumer is getting a good price break on the device has come from the radio dealers themselves. Shortly after the *Pilotuner* appeared, the trade paper, *Retailing*, reported: "Dealers objected to the low markup, making it, they claim, comparatively unprofitable to handle." The trade paper added that consumer interest in the tuner is "tremendous."

The diagram opposite illustrates what the *Pilotuner* is, and gives an inkling of how it works. All radios, AM or FM, have four sections: antenna, tuner, amplifier, and speaker. When hooked up to your AM radio, the *Pilotuner* cuts out the AM antenna and tuner and provides an FM antenna and tuner instead. FM programs can then be picked up and fed through the amplifier and loudspeaker of your AM radio.

If you own a combination radio-phonograph, in all probability you will be able to attach the *Pilotuner* to the combination yourself, using the diagram provided with the equipment. If your AM radio has posts in the back for attaching a phonograph, you will also be able to hook up the *Pilotuner* without assistance. But if your radio has no such provisions, you may have to call in a radio man to do the job, at a cost of about $3.

CU purchased two samples of the *Pilotuner*. Engineers gave them a thorough going-over in the laboratory, and found them to be generally "Acceptable." Design

Here is some information on what it does, how it works, and a word or two of caution



When Pilotuner *is hooked up with your radio, you can have either FM or AM simply by turning a switch*

and workmanship were good, something not usually found in AM table radios selling in the same price range. Only two questionable characteristics of performance were discovered:

(1) Although the *Pilotuner* has a built-in antenna, it was found that at the testing location — downtown New York — an outside FM antenna had to be connected in order to receive all the FM stations in the area. You may find that you have to supply an outside FM antenna of your own. But even with an outside antenna, there are some localities where you cannot receive some FM stations well. In a metropolitan area, with many FM stations on the air, you may not be able to receive all of them. And in an area where there is but one FM station, you may live in a location where you cannot receive it.

(2) A very objectionable hum was heard when the *Pilotuner* was connected with a number of ac-dc radios in the CU laboratory. This hum was not present when the tuner was connected to radios designed for a-c only.

The *Pilotuner* hooked up with a number of console radios gave better reception for FM programs than the radios could produce on the AM band. And the better the sound reproducing part of the radio (amplifier, loudspeaker and cabinet), the better the tone. Because consoles have large cabinets and better loudspeakers, they generally have better tone than table models. But remember — all of this applies only if you are in a locality where you can receive FM well.

The only way you can find out if the *Pilotuner* will work satisfactorily with your radio and in your locality is to try it. CU suggests, therefore, that in purchasing a *Pilotuner*, you get a money-back guarantee.

ACCEPTABLE

■ PILOT (Pilotuner) T601 (Pilot Radio Corp., Long Island City; N. Y.). $29.95. Excellent fidelity; output high enough to work satisfactorily with the input connections of any combination radio-phonograph; fairly high usable sensitivity with outside FM antenna. Automatic volume control was fair; static suppression and interference rejection were satisfactory. Required no retuning during a half-hour listening period. Covered the standard (100 mc. FM band. Built-in antenna. A-c operation only. Some shock hazard) but no short-circuit hazard. Underwriters' label.

the FM stations in a given city will have identical power and service areas. Competition for listening audience will be more on the basis of *programs* and less on the basis of strength of electrical signal. Naturally enough, therefore, the introduction of FM meets with intense though covert opposition on the part of those favored AM operators who benefit most from the present inequitable distribution of broadcasting facili'ies. This opposition is intensified by the fact that more FM than AM channels are available in every city. Present AM stations must anticipate a larger number of competitors as well as more nearly equal competitors — unless they can in some way forestall the growth of FM.

The attitude of the networks toward FM was most clearly brought into the open last fall, when the American Broadcasting Company (ABC) sought and procured FCC approval for its purchase of Station WXYZ in Detroit.

Millions for AM; $33,460 for FM

For this single AM station, ABC agreed to pay $2,800,000. In contrast, it proposed to invest $33,460 in its Detroit FM station. In other words, as Commissioners Walker and Durr pointed out in their dissenting opinion, ABC proposed "to invest in a standard broadcasting station, which its president testified could be duplicated for about $300,000, approximately 84 times as much as it proposes to invest in an FM station which will give better coverage and better service."

As ABC's president testified, every FM receiver installed in Detroit would jeopardize by so much ABC's investment in AM:

"Q. For every FM set that is sold in the Detroit area, your FM station will become that much more valuable?

A. Yes, sir.

Q. And WXYZ, accordingly, will become that much less valuable?

A. If they lose the listeners to the FM, they become that much less valuable . . .

Q. So this investment of $2,800,000 you are going to put in will become less valuable each year, and how long it retains its value depends upon how aggressive the manufacturers are in producing and selling [FM] sets?

A. That is correct to a considerable degree."

In this context, the significance of the $29.95 *Pilotuner* is clear.

But ABC was not afraid in 1946 that its AM investment might be destroyed. Together with the other networks, it has mapped out some ideas.

For one thing, the networks propose to pay an affiliate no more, initially, to broadcast network commercial programs over both AM and FM than over AM alone. Eventually, ABC testified, it might raise the combined AM-FM rate slightly to "pay FM out-of-pocket expenses." The result, of course, is to remove any incentive for AM net affiliates to build FM stations.

FM newcomers, of course, would bring listeners programs not already available on AM, but the networks have an answer for that, too. They propose to *give away* FM advertising, as a bonus, to AM advertisers, and in general to refuse network affiliation to FM newcomers. As Commissioners Walker and Durr put it:

"The newcomer will be discouraged from attempting to enter the field of broadcasting through the medium of FM because his listening audience will be limited by the scarcity of FM receivers, he will have little hope of a network affiliation, and he will not be able to compete for advertising revenue either with the standard broadcaster who has a wider listening audience or with the broadcaster who operates both AM and FM but offers both services for the price of one."

Where the *Pilotuner* comes in

The success of this scheme to block FM in order to protect entrenched interests depends primarily upon one factor: keeping FM receivers out of the hands of the public. For at the transmitting end there are both hardy pioneers prepared to take the risks involved, and underprivileged AM broadcasters who stand to gain rather than lose by a conversion to FM.

Before the arrival of the *Pilotuner*, the anti-FM forces were about 97.8% successful. Of the phenomenal total of 23,600,000 receivers produced since V–J Day, only 2.2%, or 627,000, were equipped for FM.

One reason for this is the peculiarly close relationship between the largest receiver manufacturers and AM broadcasting. RCA is the bellwether of the receiver makers and the sole owner of NBC, largest of the AM interests. Westinghouse operates its own group of AM stations from Pittsburgh to the West Coast. Crosley Corporation, recently purchased by the Aviation Corporation (with Commissioners Walker and Durr dissenting), is a large receiver manufacturer, and has a tremendous investment in clear-channel stations WLW, Cincinnati, and WINS, New York. None of these manufacturers, obviously, wants to flood the market with low-price FM receivers which will, in effect, destroy their own AM investments. These manufacturers, while they are far from monopolizing the receiver market, are nevertheless *leaders* whose path is in general followed by other receiver manufacturers.

FM got left behind

Knowing all this, FM enthusiasts have nevertheless felt confident that some manufacturer would fall out of line and push low-cost FM. Realization of their hopes was delayed by a natural postwar phenomenon: the pent-up demand for replacement receivers which could be filled by almost any kind of box that had a loudspeaker and a dial on the front panel. Instead of competing in terms of quality, price, or basic improvements, postwar manufacturers for the most part simply ran a race to see who could get receivers out first, and FM naturally enough fell by the wayside. No doubt many manufacturers also calculated the great advantage in selling a prewar receiver to as many families as possible in 1946 and 1947, then reselling them FM in 1948.

Fortunately, in recent months, consumer resistance to poorly built, obsolete receivers at inflated prices has mounted. Stores which once carried models for demonstration only are now filled to bulging with unsalable AM receivers. Several small manufacturers are on the verge of bankruptcy, and price-cutting both at the manufacturer's and at the retail level has set in. Under these circumstances, it was only a question of time before low-price FM would make its appearance.

The *Pilotuner* is the result of these circumstances. Now that the ice has been broken, numerous others may be expected to follow suit. Already, it is rumored that three table-model FM receivers priced at $25 or less will be demonstrated this fall. If so, the large companies — which have always kept a finger in FM as a hedge — will be sure to produce competitively priced models. And with FM receivers of acceptable quality freely available at a price consumers can pay, we can at least hope for a truly competitive system of broadcasting, improved programming, greater concern for minority listener tastes and wants, and the development of some FM stations to which an intelligent listener can listen without a shudder.

HANDYHOT

Like full-size machine, it washed with vane-agitators

Portable washing machines

Their low price may be tempting, but their usefulness is reduced by serious shortcomings

Several million people need — or at least want — a new washing machine. The frequent breakdowns and high repair bills on many old washers, the cost and delay of sending laundry out, the time and hard labor needed to manipulate grandmother's washboard, all contribute to the unsatisfied demand for washing machines. So the present possibility that you can get quick delivery on an inexpensive, new portable electric washer may tempt you to obey that inner urge to rush to the nearest appliance store. *But* —

Before you buy one of these portable, "midget," or "table-top" washers, think twice; first about your family's washing requirements, and second about the shortcomings of the five portable models CU was able to find in the stores.

Midget washers can be useful

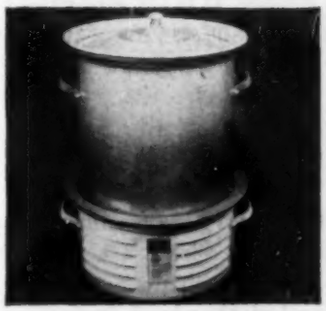
For the single girl whose washing needs are limited, a portable washer may be a good buy. For the family which can afford a second small machine to handle emergency washings during the week, or which sends the bulk of its laundry out, the portables might be considered. They can also be useful on vacations. For the apartment dweller with no basement and no room for a full-size machine, the portable may be better than no washing machine at all.

For the family which thinks it can't afford a full-size washer, the low price of the portable models is tempting, but probably a poor investment. Full-size machines costing well under $100 have been rated "Acceptable" by CU (*Reports*, February). A washing machine should last at least ten years — much longer with good care. Because it is a long-term investment, selecting a washer on the basis of original cost alone may prove pennywise.

The portable models are too small to be useful for sheets and turkish towels. But they will wash somewhat less than a daily ration of baby's diapers at a load, and they are convenient for lingerie, tea towels, dish cloths, socks, handkerchiefs, wash cloths, and all the little odds

STERLING

This machine was identical with Handyhot except for trim, price, lack of steel tub

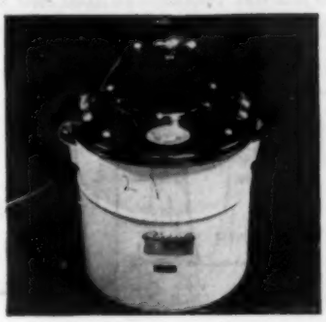


ELECTROMITE

Its washing action came from the tub, which rested on an oscillating platform

EASY WHIRLDRY

It was "Not Acceptable" because of excessive wear, but washing ability was high



CINDERELLA

The Cinderella made too much noise to be "Acceptable"; tub rusted where enamel chipped

THIS IS WHY . . .

Easy Whirldry was "Not Acceptable": it wore through test sheets in less time than other brands took to show first signs of wear

and ends you may be reluctant to leave in the clothes hamper until your next big washday.

Capacity: less than claimed

Four of the five models CU tested claimed a capacity of two pounds dry load, or slightly more; the fifth brand, *Electromite*, claimed 1¼ pounds.

With the full recommended load, CU found that very poor washing resulted. Reducing the load substantially improved the results. For adequate agitation, no more than two-thirds the recommended load could be used.

Even the maximum recommended load, moreover, bears little relation to the average family's weekly requirements. Two pounds is approximately one-sixth the load of the average full-size washer. It is the equivalent of 13 diapers. Or, put in a slip, a shirt, a pair of underwear shorts, a pajama top — and the pajama bottoms will overload the washer. The *Electromite*, with its smaller capacity, has an even more limited utility.

How clean is clean?

The most obvious requirement of a good washing machine is that it must wash clothes clean. CU tested "washing effectiveness" by loading each washer with a standardized soap solution and clothes load, including pieces of sheeting which had been "dirtied" with standard soils. After washing for 15 minutes, the whiteness of the sheeting was then measured by a photoelectric reflectometer.

Only one model, the *Easy Whirldry*, was found to wash clothes as clean as an acceptable full-size machine — and it had to be rated "Not Acceptable" for other reasons. The other four midget models, even with a reduced load, were inferior to most large machines and to the *Easy Whirldry*. Nevertheless, they washed clothes cleaner than could be done easily by hand.

For hard-to-clean things, for sterilizing diapers, or if you don't have hot water on tap all year round, the *Handyhot*, *Sterling* and *Electromite* are so designed that you can place them on the stove and boil the clothes.

Wear and tear

Next to washing efficiency, minimum wear and tear is the most important criterion of quality in a washing machine. A washer hard on clothes may do enough damage during its five or ten years of life to pay for the best machine on the market.

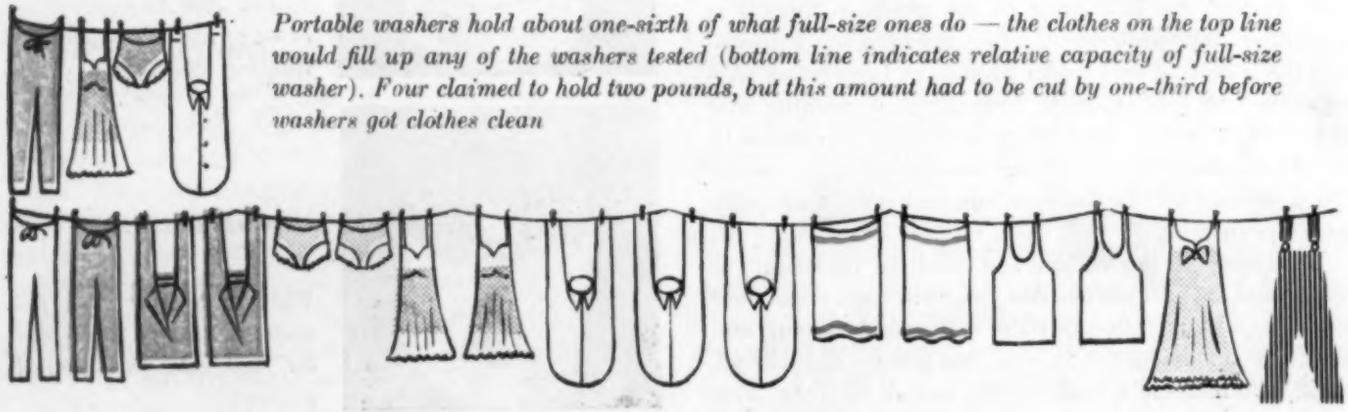
For its failure on this count the *Easy Whirldry*, despite its superiority in most other respects, was rated "Not Acceptable." It consists of an outer tub and an inner perforated container with vanes projecting into the clothes. In washing, the perforated "spinner" oscillates, agitating the clothes. The *Easy* wore holes in sheeting (see cut) in less time than the other four brands took to develop the first signs of wear. Because of its convenience and cleaning ability, some persons may prefer this machine despite the fact that it is hard on clothes.

Handyhot and *Sterling* washers use the conventional vane-agitator common to full-size machines. The *Electromite* has an oscillating platform on which the tub rests. As in the *Easy*, stationary vanes are used. The wholly unconventional *Cinderella* operates allegedly by magic — actually by means of a suction device which draws air bubbles through the clothes and water.

All of the washers were tested by measuring loss of tensile strength of sheeting after many hours of continuous washing; no excessive wear and tear, except with the *Easy*, was noted.

A major drawback: lifting tub and water

An important advantage of the portable washer is its



Portable washers hold about one-sixth of what full-size ones do — the clothes on the top line would fill up any of the washers tested (bottom line indicates relative capacity of full-size washer). Four claimed to hold two pounds, but this amount had to be cut by one-third before washers got clothes clean

convenience; you can place it next to the sink, fill it with an ordinary length of hose, and wash.

In four of the five models tested, however, this convenience is in considerable measure impaired by the fact that no means is provided for convenient *emptying* of the tub. Unless the user provides some kind of siphon arrangement himself, he must lift the washer to empty it. The weight of the filled *Handyhot* and *Sterling* tubs is 44 pounds, the *Cinderella* 35 pounds, and the *Electromite* (which handles only eight diapers) 27 pounds. Lifting 44 pounds of tub and water is no child's play; and if the tub is filled with boiling water, it may be dangerous.

The *Easy Whirldry*, unfortunately unacceptable because of excessive wear and tear, is superior in this respect. It is equipped with a hose attached near the bottom of the tub. By operating this washer near a sink or bowl, the tub can be easily emptied through the hose without lifting.

Wringers and spinners

The *Easy Whirldry* is as good as its name. After washing or rinsing, excess water can be effectively removed from the clothes by spinning.

A small hand-driven wringer 7½ inches wide can be purchased with the *Sterling* and *Handyhot* washers at extra cost; or this same wringer can be purchased separately and used with the *Cinderella*. No wringer is available for use directly with the *Electromite*.

Rust, noise, safety, and design

Accustomed to the skimping and inferior materials of wartime production, consumers have long anticipated that with the end of wartime shortages, long-life equipment like washing machines would be built of materials suitable for the purpose. Too frequently these expectations are still unrealized.

Manufacturers have every reason to anticipate, for example, that a washer will get wet, and hence must be rustproof. Rust not only causes rapid deterioration of the machine, but is responsible for hard-to-remove stains on clothes. Only one of the five midget models tested was satisfactory in this respect.

The *Cinderella* was rated "Not Acceptable" largely because the hidden portion of the underside of the cover rusted excessively in use. In addition, both it and the *Easy Whirldry* have enamel or porcelain surfaces which chip easily unless handled with special care — and the chipped spots rust in use. The *Sterling* and *Handyhot* washers showed the beginnings of small rust spots during the tests.

Several other flaws of design were noted. The *Cinderella* was so noisy as to be "Not Acceptable" for that reason alone in the average apartment. The *Easy Whirldry* had a tendency to "walk" if the surface on which it stood became wet — with risk of falling to the floor. The *Electromite* tended to turn in circles while in operation, wrapping itself in its electric cord.

On the other hand, all of the models tested proved satisfactory with respect to retention of heat, ease of cleaning, mechanical endurance, short circuit and shock hazard. The greatest power consumption was about 1¢ per hour. No radio interference was caused by the four a-c washers and very little by the *Easy Whirldry* ac-dc.

• • •

Ratings of washers

Two samples of each washer were tested. Prices are list prices (from which discounts of 10% and 15% are available in some retail stores). "Manufacturer's recommended load" is higher than load recommended by CU for effective washing (see report). Brands are listed in estimated order of over-all quality. "Acceptable" washers were about equal in washing ability and wear on clothes.

ACCEPTABLE

■ HANDYHOT Model 1-XL-05, Type XLUD-05A (Chicago Electric Mfg. Co., Chicago). $38.95 (stainless steel tub); $29.95 (aluminum tub); wringer available separately for $6.95. 14¾ in. high by 16¼ in. diameter over-all. Weight of filled tub, 44 lb. Clothes may be boiled while washing. Manufacturers recommended maximum clothes load just over 2 lb. (13 diapers). Motor is in cover, but the agitator is not attached to it, and care must be exercised to engage cover and agitator. A-c only. Guaranteed for one year. Claimed 34 service stations in 28 states. On one sample, the rubber gasket around the rim opened and was replaced by a local service station free of charge. Carried Underwriters' label.

■ STERLING Cat. No. — 2260L (Aldens Chicago Mail Order Co., Chicago). $28.95 plus postage. Identical in appearance, weight, and operation to *Handyhot* (see above), except for decorative trim, and aluminum rather than the preferable stainless steel tub. Wringer available separately (Cat. No. — 2261L) for $6.95 plus postage.

■ ELECTROMITE Model D (Menasco Mfg. Co., Burbank, Calif.). $33.75 (recently advertised for $19.95 in NYC). 18½ in. high by 14¼ in. diameter. Weight of filled tub, 27 lb. Clothes may be boiled in tub, but not while washing, since tub fits on motorstand at bottom. Aluminum tub. No wringer available. Manufacturers recommended maximum clothes load, 1¼ lb. (8 diapers). A-c only. Guaranteed for one year. Did not carry Underwriters' label. Most quiet operation of machines tested. Had rubber feet to protect furniture.

NOT ACCEPTABLE

○ EASY WHIRLDRY Model H-46 (Easy Washing Machine Corp., Syracuse, N. Y.). $49.95. Over-all dimensions 17½ in. high by 17 in. on one diameter and 19 in. on other diameter because of drain hose. Only model with attached hose for draining. Spinner dryer. Has no separable tub. Porcelain or enamel finish, must be carefully handled to avoid chipping. Manufacturers recommended maximum clothes load, 2 lb. (13 diapers). Ac-dc motor. Guaranteed for one year. Did not carry Underwriters' label. Had rubber feet, and on wet surface, washer had to be held to prevent its walking off table. Washing ability superior to other portable washers, and approached that of full-size washers. "Not Acceptable" because of excessive wear on clothes. (See text).

○ CINDERELLA Model D (Cinderella Mfg. Co., Jackson, Mich.). $34.95. 18 in. high by 15½ in. diameter. Weight of filled tub, 35 lb. Enamel finish must be carefully handled to avoid chipping, which will result in rusting. Manufacturers recommended maximum clothes load just over 2 lb. (13 diapers). Mechanism consists of motor-driven centrifugal air pump in cover, with barrel-like attachment of galvanized metal, intended to draw air bubbles through wash. The cover is somewhat clumsy to handle. Ac-dc motor. Carried Underwriters' label. This washer was "Not Acceptable" because of excessive noisiness and excessive rusting under cover.

Press Ass'n

Building today means scores of separate parts, a swarm of men to assemble them, — and numerous markups en route

Some hope in the housing industry

Shot through with antiquated codes and practices, lack of planning and faulty financing, the housing "industry" holds out some hope for consumers in the development of new materials and stream-lined ways of putting them together

— by Virgil Tobin, *former Director of the New Materials Section, Office of the Housing Expeditor*

It has been said many times, and with much truth, that the housing industry, in the sense that we speak of the automobile industry or the transportation industry, is not an industry at all. It is rather a loosely connected mass of parts manufacturers, middlemen, retail dealers, small-scale operators, entrepreneurs, speculators, and handicraft artisans, each operating within the orbits of his immediate interest without real regard for the eventual end-product, the finished housing unit.

When you buy an automobile, you don't hire a mechanic to shop around for an engine, wheels, transmission, body, and so forth, and then assemble those thousands of various parts into a finished car. Yet in this age of assembly lines and mass production, that is exactly what takes place when you buy a house. There is no integrated responsibility for materials, design, quality, or price of the product through the stages of manufacture until it is finally delivered to the consumer.

A comprehensive study made by the National Housing Agency revealed that materials, and the labor to assemble them, represent more than 75% of the total cost of the average house built in this country, including the cost of the improved land on which the house stands. The survey also showed that there has been little improvement in the methods of building houses in the last hundred years or more. Essentially the same materials and methods used by our ancestors are used today. Houses are still made up of many individual pieces and layers, costly to manufacture, distribute, and assemble into a dwelling by "cut and try" methods. Here, obviously, is a section of the whole problem in which a little improvement might go a long way. More rational approaches to the manufacture and handling of basic materials aren't going to solve the housing problem, to be sure. But to whatever extent the production of housing materials and the use of housing labor can be placed on an assembly-line basis, individual home builders will benefit. A few steps in this direction have been taken, some examples of which are worth looking into.

The Tectum wall

The exterior wall of a conventionally built wood frame house has as many as 14 individual layers, each of which is applied separately by hand. Each of these layers serves a particular purpose. As recently as last year, no one had developed a wall material which would combine those many layers into a single thickness, and which could be made in a factory by a mass-production process.

Such a material, performing all the necessary functions of an exterior wall, has now been developed and production on a mass scale is expected to begin early in 1948. The wall is called *Tectum*, and it will be manufactured by Newark Industries, Newark, Ohio. The company's plans call for the erection of six or seven plants, with a total capacity to produce enough wall material for about 100,000 houses a year.

Tectum is a truly autonomous wall; it combines the equivalent of studding, sheathing, insulating material, lathing, plaster, and all the other elements of the conventional wall into one single thickness of factory-produced wall material. Its durability compares favor-

the tectum wall

Up to 14 separate layers, each put up by hand, go into the walls of an ordinary wood frame house. The Tectum wall, to be manufactured by Newark Industries, Newark, Ohio, is a single wall that will replace all but the finishing

Tectum takes the place of lath, plaster, studing, insulation, sheathing, sheathing paper

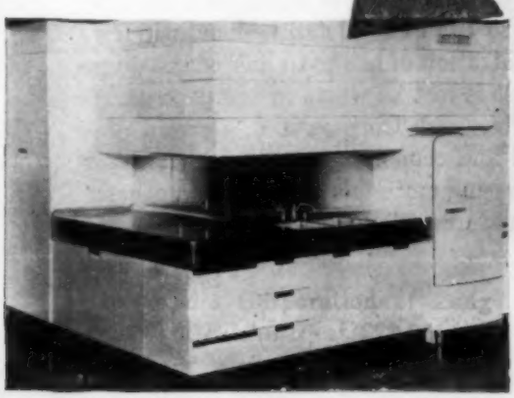
It can be sawed, chopped and drilled like wood; after 1½ hours exposure to blow torch it shows no sign of combustion

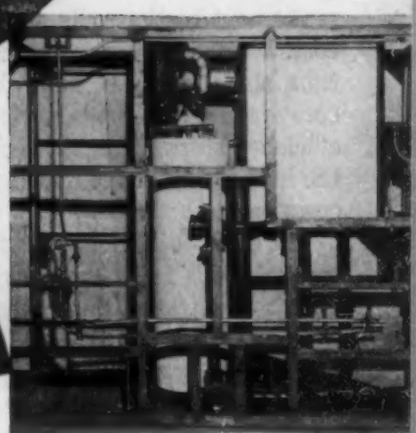
the utility unit

Installing bathroom, kitchen and heating plant as a unit made on assembly line is not a new idea, but the Ingersoll Utility Unit, made by Borg-Warner in Chicago, is one of first such to be produced. Avoiding cut-and-try installation can save from $300 to $600 per house

Bathroom, with recessed tub-shower combination, is interchangeable with lavatory

Kitchen and bathroom come back to back with plumbing and heating unit (lower right) between





Kitchen puts food storage, preparation, cooking, serving and laundry work on a production line basis

ably with that of a conventionally built wall. It is fireproof, fungusproof, and termiteproof. It cuts and saws like wood, and has the nail holding properties of white pine, so that only the simplest tools are required to put it in place and to join the large panels together at the building site. Because it is very light in weight, two men can easily erect and join together panels 4x8 feet in size. It is made of wood wool fibers, sprayed and coated with an inorganic cementlike material, compressed in a caterpillar press.

The *Tectum* wall has other innate characteristics which give it superior qualities. The 3⅝-inch *Tectum* wall has almost as great insulating value as a two-inch thickness of cork or rock wool, which is far in excess of any insulation being put into houses today. In the opinion of competent heating engineers, the use of *Tectum* for the shell of an average six-room house should permit heating the house comfortably through a Midwest winter at a cost of about $35 or $40 for the season, which represents a substantial fuel economy. Since the transmission of sound through *Tectum* is almost zero, when it is used for interior partitions between rooms, or as floor base material between stories of a building, it will confine practically all noises to the room where they originate.

Since the panels are joined together by splines, the insulation is complete and continuous throughout the wall surface. This eliminates the possibility of "ghost marks" due to uneven escape of heat at the framing members, which so frequently appear on the inside wall surfaces of houses using conventional wood frame construction. And the ease with which *Tectum* can be cut and sawed at the site permits any type of architecture to be used in the design of the house. Employing *Tectum*, your house can be Colonial, Modern, or whatever.

In price, *Tectum* should also compare favorably with conventional walls. At least, the company plans to price it under the cost of the materials which it replaces. And the erection cost on the site should be less than one-third the cost of building the old-fashioned wall.

The utility unit

Americans pride themselves on their bathrooms and kitchens, and the convenience and the efficiency of their plumbing and heating plants. This equipment taken together comprises the "utility core" of the house, and it ranks next to the walls of the house in total material cost. The factory assembly lines producing stoves, bathtubs, sinks, furnaces, and other elements of the utility core are marvels of production efficiency. But there the efficiency stops. Once these products leave the factory, the inefficiency of the housing industry takes over, and costs begin to mount.

The bathtub, for example, flows to an area distributor who takes his profit and sells it in turn to a dealer. The building contractor must buy that tub from that dealer — with a further markup, before he can install it in your house. The contractor also takes a profit, both on the tub and the labor required to install it. If you buy the house from a real estate agent, he adds another profit on the whole transaction, putting a markup on every article in the house, including the bathtub. The added profits along the line, after the tub leaves the factory and before it reaches you, are over 100%.

And to get the tub, or any other utility item, installed in your house is another marvel of gross waste.

All this waste can be eliminated by producing all the utility elements necessary to equip a modern house as a unit, on modern factory assembly lines. The completed unit can then be shipped direct from the factory to the building contractor with all kitchen, bathroom, plumbing, and heating elements combined. Thus expensive "cut and try" methods of installation can be eliminated, and distributing markups and profits kept to a minimum. Such units, although they have encountered stiff resistance from old-line manufacturers, distributors and plumbers, are already in production.

One of these is the *Ingersoll Utility Unit*, made by the Borg-Warner Corporation of Chicago. It is designed with the kitchen and bathroom back-to-back, reducing the length of plumbing lines. Heating and plumbing equipment are located between the two, permitting the house to be designed around the unit to take advantage of the most economical layout. The result is uniform quality of material and workmanship, plus lower housing costs. Contractors estimate a saving of between $300 and $600 per house through the use of the *Ingersoll Unit* instead of the conventional equivalent.

Other large companies are making plans to fabricate utility units along the general design lines of the *Ingersoll Unit*. The Boeing Aircraft Company, Seattle, Washington, has built a preliminary model of a unit with much eye-appeal. This, in addition to the customary fixtures, includes a fully automatic washing machine of the Bendix-type installed under the kitchen sink. Tentative plans call for the bathtub and wash basin to be made of a "Fiberglas" plastic laminate instead of porcelain enamel. The laminate has several times the strength of steel and can be produced in any color. The Boeing Company, like Borg-Warner, is making plans for the mass production of the unit.

Building materials from waste wood

In this country, the processing of wood from the timber stage through to the finished table, door, window, etc., results in a utilization of less than half of the original wood — the rest is lost as waste in the processing.

Recently the Plaswood Corporation, Detroit, developed a practical and economical method of forming wood waste into housing materials by using a synthetic resin as a binding material. Three housing materials are

Continued on page 370

FOOD PARCELS FOR EUROPE

The need is great, the obstacles to delivery many; often your best bet is CARE

At no time since the start of the war has the European food shortage been as acute as it is right now. With UNRRA a thing of the past, and new relief measures still in the planning stage; with a poor harvest last year and another small crop expected this year, the people of Europe are more than ever dependent on the food sent them from this country.

There are three ways for Americans as individuals to get food to hungry families and friends in Europe. It is possible (1) to send off a home-packed parcel; (2) to purchase a commercially packed one, such as those displayed by many grocery and department stores; and (3) to use the service provided by CARE (Cooperative for American Remittances to Europe, Inc.). Each of these methods has certain advantages, and some corresponding disadvantages.

The standard contents of the CARE packages are well-balanced nutritionally, and delivery is practically certain. On the other hand, if you choose the contents of a parcel yourself, you can cater to the personal tastes of the recipient. But as your own mailer you come up against a host of regulations and the knowledge that delivery is far from assured. Parcels packed and sent commercially save you time, but they cost a lot, and are often poorly packed and shipped. Viewed broadly, CARE seems to offer the best means of getting food to those who need it.

The CARE packages are sent quickly and safely; because CARE buys and ships in bulk, you can be sure of getting your money's worth; and you can also be sure of getting a personally signed receipt from your addressee or getting your money back.

What CARE provides

CARE itself is a nonprofit, Government-approved cooperative, sponsored by 27 relief agencies — all members of the American Council of Voluntary Agencies for Foreign Service, Inc. CARE has stockpiled specially prepared standard packages of food in warehouses at distribution points in those European countries in which it operates. As orders are received in the central office in New York, they are airmailed to the warehouse, the addressee is notified of the arrival of the package and asked to sign a receipt which is returned to the donor in proof of delivery. If, for any reason, delivery cannot be made, the money is refunded at the end of 120 days after receipt of the order by CARE's foreign representative.

The cost of this transaction, which covers contents, shipping, delivery, insurance, administrative expense and distribution, is $10. There are no extras. Ten dollars buys 22½ pounds net of food, with a nutritional value of more than 41,000 calories.

CARE is now operating in the following countries: Austria, Belgium, British Isles, Bulgaria, Czechoslovakia, Finland, France, Greece, Hungary, Ireland, Italy, Netherlands, Poland, Rumania, and Germany (American, British, and French zones, and all of Berlin).

CARE packages enter these countries free of all duty, tax and ration regulations. The service will be extended as rapidly as other countries agree to necessary conditions. As many as three of each of CARE's packages (others include blankets and textiles) can be sent to an individual recipient every month. Plans are under way for further local and other variations in package contents. Currently CARE is handling 13 different packages, including two baby food; a kosher; a British (which contains orange juice instead of flour and in other ways deviates from the standard bundle); two $4 packages containing 10 pounds of lard and 25 pounds of enriched flour, respectively; and layette, blanket, woolen suiting, cotton, household linen and knitting wool parcels. All orders for CARE packages should be sent to CARE, 50 Broad Street, New York 4, N.Y.

Home-packed parcels can be sent to many countries where CARE is unable to function. Or, in some cases it may be desirable to send home-packed parcels even where CARE does operate.

If you know the recipient well, you may know that a good part of a standard package, such as that

CARE package provides maximum nourishment

WHEN PACKING A PARCEL YOURSELF

Remember that snacks do not satisfy the appetite but may be a relief from plain fare . . . items packed in cardboard or glass are a poor bet . . . canned bacon, and canned meat with low water content are good choices . . . spaghetti, dehydrated soup packed in foil travel well and are nourishing . . . cigarettes are forbidden in most places . . . cheese should be hard and well-cured . . . chocolate in foil travels better than plain candy . . . canned honey, fruit in heavy syrup are good but heavy to ship . . . sugar is needed, but make sure it is permitted at destination

provided by CARE, will not be fully suitable in spite of its being a good value nutritionally. It is possible that the person who is to receive your package already can obtain some of the foods contained in the CARE package and would therefore prefer other items or a change in the proportions of the material normally included. You may want to supplement the basic items of a CARE package with delicacies which vary the diet and relieve monotony.

Home-packed parcels

In any circumstances which rule out or minimize the service of CARE, therefore, the best alternative is carefully planned parcels made up and packed by the sender. But before sending off a parcel, you must be fully aware of numerous regulations, which vary from country to country and are often changed. Nonconformity only invites theft or seizure by customs officers. Unforeseen charges which the beneficiary cannot meet or complications he cannot cope with may mean tantalizing loss of much-needed food.

To insure safe delivery you should obtain the most up-to-date information on postal, customs and ration regulations from the country of destination or its nearest representative or both. Inquiries may be addressed by mail to the appropriate consulate in New York City or you may apply personally or by mail to the consul nearest you.

You should find out the type and size of gift parcel, if any, which is exempt from duty, import, excise or other taxation. Such charges cannot be prepaid and even in the few cases where funds can be sent to cover them, the amount is difficult to gauge from this end. The only way to avoid or minimize difficulties for the recipient is to find out the legal and practical requirements for "noncommercial" parcels and then to see to it that your packages meet them.

Before starting a package, be sure to check with the Post Office on the weight permitted. This varies from country to country, and from time to time. There is a prohibition against the sending of more than eleven pounds or $25 in value per week to one address for some countries.

All shipments to a foreign destination require customs declarations (sometimes in triplicate), dispatch notes and stickers which the post office can prescribe and furnish. Declarations must be itemized in detail. Parcels which are only vaguely described are liable to customs inspection even in those countries where gifts are ordinarily exempt. Elsewhere they will be sure to be opened, and once opened their chances for delivery intact are reduced. All packages should be plainly marked "GIFT PARCEL," if possible both in English and in the language of the country of delivery.

Shipping forms provide a place for "Alternate Disposition" in case the package cannot be delivered to the addressee. Here you should name a second member of the family or group as recipient since the absence or death of the person to whom the parcel was originally sent can deprive his whole family of your gift. It is unwise to try to have the package returned.

The address should be printed and should appear more than once on the carton as well as on the wrappers. The carton, preferably a reinforced one sold expressly for overseas use, should be packed tight enough with crumpled paper, so that the contents don't jiggle. No glass or pottery containers should be included and cardboard packages of flour, cereals, etc., should be wrapped in paper and sealed to avoid breaking and leakage.

Parcel post to many countries cannot be insured and, where it can, protection is limited to the donor's money and does not insure delivery of the package. In some cases insurance covers only marine damage. To collect insurance in case of non receipt, you will need cooperation from the addressee; he should be notified of the sending of the package and be urged to report nondelivery.

Here are some suggestions for package contents:

Fats (canned; scarce everywhere but in Denmark): butter, lard, bacon, shortening, and, for Italy, oils.

Meats (canned): where meats are in the form of hash, stews, it is wise to buy and inspect a can to see how much actual meat is provided and to avoid brands containing considerable potatoes, other vegetables, or liquids. Canned sausage contains needed fat. (See report on "Canned Luncheon Meats," *Reports*, August.)

Cheese: hard, well-cured, natural cheese packed in several layers of waxed paper, sealed with gummed tape. Well-cured cheddar is a good buy.

Fish: canned salmon, tuna, etc.

Fruit: dried apricots, prunes, raisins, currants, mixed dried fruits, etc., canned fruits in *heavy* syrup.

Milk (whole dried) and *Eggs* (powdered).

Chocolate and Cocoa: in cool months, hard chocolate bars in metal foil and ready-sweetened cocoa in tin or cardboard, if rewrapped and sealed.

Honey (canned).

Coffee: vacuum-packed and ground to the recipient's taste, if you know it.

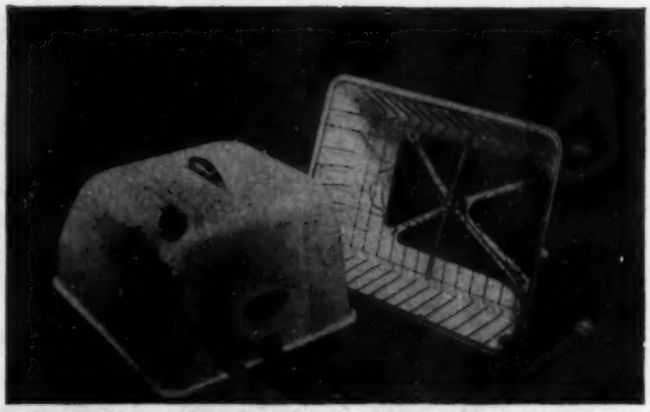
Tea: especially for England.

Flour, Cereals and Grains: rice, spaghetti, oatmeal, various flours of the recipient's choice, rewrapped and sealed. Prepared mixes such as cake, muffin, biscuit mix, if acceptable.

Soup Mixes (dehydrated: see *Reports*, February 1945): If individually packed in foil, these make useful crevice fillers.

Continued on page 369

The DeLong (top) was Acceptable; the Sprayway was not



Portable dishwashers

The facts and the fanfare did not add up: one washer didn't clean, the other didn't hold enough

Someone has figured out that the average housewife washes about 12,000 pounds of dirty dishes a year — 230 pounds a week, or 33 pounds a day. Automatic dishwashing machines are, of course, available, but the cost — if one can be found — is about $200, and they take up more space than can be spared in many kitchens.

Two relatively small and inexpensive dishwashers have now appeared on the market, the *Sprayway*, manufactured by Scanlan Sales Co., New York, and sold for $39.95; and the *DeLong*, manufactured by DeLong Engineering Co., Inc., of South Gate, California, and sold for $34.95. Both are light, fairly portable, and more or less automatic; both operate by water pressure. CU has tested both, and has come to the regretful conclusion that, even to the tune of 12,000 pounds a year, the old-fashioned way is a lot better than either machine, however well-intentioned the idea behind them.

Neither machine is in any way a substitute for a full-sized dishwasher which may heat its own water, usually holds enough dishes for a family of six, and really gets the dishes clean. The deficiencies of these little models are fundamental: one holds enough dishes for a small family, but doesn't wash them clean; the other cleans more efficiently, but doesn't hold enough.

Both machines have sprayers, which operate just as some lawn sprinklers do. When the hose is connected to a water faucet and the water turned on, the sprayer whirls around. *Life* Magazine, in a burst of enthusiasm for the *Sprayway*, remarked that the tap water is raised to "hurricane violence." Apparently, however, the violence isn't great enough to get dirty dishes clean. In CU's tests, the dishes in the *Sprayway* were still soiled after twelve minutes, although the machine is sold with the claim that it will clean them in five minutes. The dishes in the *DeLong* were cleaned satisfactorily after five minutes, except for the dish placed in the last loop of the rack, which the machine failed to wash.

The *Sprayway* consists of a stainless steel container 22 inches high, with a bottom rack for dishes, a wire basket for silverware, a top rack for cups, tumblers, etc., and a strainer-like cup for the detergent. The racks hold four cups, four saucers, four twelve-inch dinner plates, four bowls, two platters, four butter plates, four dessert plates and four six-inch tumblers. The sprayer itself is mounted on a shaft directly below the top rack. In use, the washer is placed on the drainboard with the drain opening close to the sink. Since the bottom of the container is slightly concave, some water always remains in it after draining. After the dishes have been washed and rinsed, they can be either removed and dried, or left in the racks to drain dry.

The *DeLong* consists of two white porcelain sections, which together measure 17x14x12 inches. It is equipped with two racks, but only one can be used at a time. There is room in the dish rack for ten dishes; the other rack holds silver, cups, glassware, etc. Deep dishes, such as soup plates or bowls, must be placed face downward on the cup rack. And there is also a cup to hold the detergent. This hardly provides room enough for dishes for two persons, who would use more than ten dishes at dinnertime, counting serving dishes, cups and tumblers. The machine has two sprayers, and dishes are

showered from above and below. The bottom is open, and the machine is placed in the sink when in use. When the dishes are clean, they can be removed and dried, or the rack lifted out and the dishes left to drain.

The *DeLong* cleaned more efficiently than the *Sprayway*, but even so CU's testers found that if dishes tip forward or if silver is placed too close together, some things may have to be washed over again. And it takes at least two or three washings to take care of all the dishes for even a small family. Neither machine can handle pots and pans.

If you heat your own hot water, you'll find the *DeLong* an expensive device. CU found it necessary to use from 20 to 25 gallons for the two runs required for even a small dishwashing job. As to the time these washers are claimed to save: considering the time that must still be spent on stacking, scraping, and setting-up, washing by hand is faster. Their only advantages would seem to lie in the fact that a machine is doing some of the dirty work for you, and that the washers can stand much hotter water than you can.

How CU tested

Dishes, glassware, cups and silver were soiled with a solution consisting of two parts peanut butter, one part butter, one part *Crisco* and a red dye. Washing was done with soft water and soap. Water was kept at 140 degrees Fahrenheit, and at a pressure of 40 to 45 pounds. Dishes were examined after the first five minutes, and then at intervals up to twelve minutes. Since the *Sprayway* hadn't cleaned dishes after twelve minutes, it was given no further tests. The *DeLong* received further home use tests which confirmed the laboratory's findings. Neither machine can be recommended as a substitute for a full-sized dishwasher, nor the *Sprayway* as a portable dishwasher, since it simply didn't get dishes clean. As for the *DeLong* — well, it all depends on the lengths to which you're willing to go to get out of washing dishes by hand.

Ratings of portable dishwashers

ACCEPTABLE

■ DELONG (DeLong Engineering Co., South Gate, Calif.). $34.95. Two white, porcelain sections, 17x14x12 in. over-all. Two racks, one for dishes, the other for silver, glasses, etc. Only one rack could be washed at a time. Revolving sprayers located in both top and bottom sections. Bottom section open to permit drainage; washer placed in sink when in use. Washed dishes satisfactorily in 5 minutes, but two or more washings and at least 25 gallons of water were necessary to do dishes for two people.

NOT ACCEPTABLE

○ SPRAYWAY Dishwasher (Scanlan Sales Co., NYC). $39.95. Circular stainless steel container 22 in. high x 17 in. diameter, including cover and handles. Two racks, one for dishes, the other for cups, glasses, etc. Revolving sprayer located directly below top rack. Drain located on side of container, near bottom; washer placed on drainboard when in use. Held enough dishes for two people. "Not Acceptable" because it did not clean adequately in CU's tests.

IF YOU MUST BUY A NEW OIL BURNER—

Since CU last reported on oil burners (*Reports*, April) the oil shortage has become more severe. Because of this and a number of other factors, CU's advice is to wait for another season before buying a new burner. Fuel oil prices have recently gone up again; and, although wholesale oil-burner prices have dropped during the last three months, retail prices have not dropped in proportion. It will probably be another year before installed prices are down; and another year, too, before you can count on a combustion-quality guarantee and a high grade of installation and service work.

If you feel that you must buy a new burner now, try to get as many of the following guarantees and assurances as possible. First, specify in the contract that the oil-burner installation is to be considered complete, and you as the buyer are to be billed, only after the burner has been placed in operation and is operating to your satisfaction in every respect. Such an understanding gives the buyer the opportunity to decide whether the installation is satisfactory and to call in an oil-burner expert, an architect, a heating engineer, or an oil company expert to help him judge if the installation is complete and entirely satisfactory. *An installation which has any defects or shortcomings should not be paid for, or at least should not be paid for in full, until the defects or shortcomings have been eliminated by the dealer.*

For those who are buying a burner on time, the same advice holds. After the burner has been installed and is in operation, acceptance papers have to be signed. And after the signing, the owner must pay for the burner in the manner outlined in the time-payment agreement. But these papers should not be signed if the purchaser has any doubts about the installation. If there seems to be something the matter with it, make a list of its shortcomings, and inform the installer that the items listed must be made right before the papers are signed.

For most homeowners, a "labeled" gun-type oil burner is the best bet. Two labels should be on the

burner, one which indicates the manufacturer's name or the brand name of the burner, and one which indicates that the burner is approved by the Underwriters' Laboratories.

Usually it is best to select a burner model which was in production for some years before the war — or at least a make of burner which was offered before the war, since such burners are less likely to have "bugs" in them.

Make certain before you buy . . .

Make certain you know the name and the address of the burner manufacturer. Have the dealer who offers you the burner supply you with the manufacturer's printed literature which lists and describes fully the particular model (this model should be specified in the sales contract, of course). Make certain before you buy a burner that the manufacturer provides owners of his burners with (a) complete, printed, homeowner instructions on the burner, and (b) a manufacturer's guarantee that burner parts which prove defective will be replaced at no charge within a year from the date the burner is installed.

If you feel that your oil bills are too high, or if you are having undue trouble with your burner, send the details to the manufacturer with a copy to the installer. If high oil consumption is your complaint, ask the manufacturer if arrangements can be made to run combustion tests free of charge in order to determine the efficiency at which oil is being used.

Get these guarantees

The oil-burner dealer's contract should include two all-important guarantees:

1, a guarantee that "free service" will be provided by the installer for one year from the date on which the installation is accepted and paid for by the homeowner; and that any time and material which must be provided by the dealer in connection with breakdowns and defects will be provided at no additional charge. This should apply not only to the oil burner itself, but to all the accessory equipment which is installed with the burner.

2, a guarantee that the combustion quality test will show a minimum of 10% CO_2 (carbon dioxide) in the flue gases with the burner adjusted to operate normally and without perceptible chimney smoke. When the installation has been completed, the burner dealer should make tests of CO_2, and draft, and stack temperature, and leave a copy of the record of results with the homeowner. If possible, the homeowner should arrange for identical tests to be made by another oil-burner expert, as a check on the oil-burner installer's tests. Many fuel oil companies will make such tests for their fuel oil customers at no charge.

GADGETS

One cuts out commercials, two pep up electric shavers, another is a shaver battery

COMMERCIAL CONTROL

For better or worse, radio commercials are here to stay. If you are the type whose blood pressure soars at the first notes of "Supersuds," you'll be interested in a gadget now on the market that's supposed to cut out commercials. *Commercial Control*, it's called. It doesn't solve the problem of radio commercials, but it's an interesting weapon for the consumer's defense.

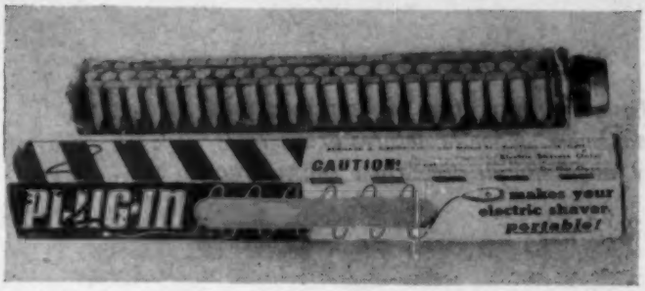
Commercial Control plugs into the wall; you plug your radio into it. There is a long extension cord with a push button at the end. At the first inkling of a commercial you push the button and the radio goes dead for about a minute — standard length for many product "plugs."

Commercial Control comes in two versions. The De Luxe model, at $4.95, sports a white extension cord and a case with a plastic bottom, displaying an elaborate interior mechanism, with thermostat time control. It works with one push button. The Junior model, at $1.95, has two push-buttons on the control box; left button for regular commercials, right one for singing jingles. The right button has a rubber suction cup that releases the switch more quickly than the left cup does.

Both models can be adjusted for timing. On the Junior version the push buttons can be screwed in or out, supposedly to regulate the depth to which the suction cups are depressed — thereby regulating the timing. Sloppy construction and variations in pressure on the button make timing a little erratic; with practice, however, you can get fairly consistent intervals of silence.

The De Luxe model has a screwdriver slot for time adjustment. This can't be done at one sitting, however; after each adjustment and trial you have to wait about a quarter of an hour for the thermostat to cool off before trying a new one.

Both versions of the control work on d-c as well as a-c. Although the sponsors claim that only the De Luxe model has "remote control," do not be misled. In both cases your radio is remotely controlled, at least to the extent of permitting you to sit several feet away from the radio. CU doubts that many listeners will bother with these gadgets for long; but if you do want one, they work reasonably well.



The battery's utility is a dubious one: 10 to 20 shaves cost from 15¢ to 30¢ each

The Ranger (below, center) proved to be a good booster; the Zipper (right) didn't

BOOSTERS AND A BATTERY

There are some developments in the electric shaver field of interest to dry shave enthusiasts. The news concerns (a) a couple of gadgets that pep up tired shavers and (b) a dry battery for camping trips or other occasions when current for shavers isn't available.

The two plug-in gadgets work on entirely different principles. One of them, the *Ranger*, changes a-c into d-c by means of a selenium rectifier. The idea behind this is that the ordinary ac-dc shaver runs faster on d-c than on a-c. The other gadget, the *Zipper*, is supposed to speed up the shaver by raising the a-c line voltage.

The *Ranger* actually does convert a-c to d-c and does speed up the operation of most shavers. Any normal shaver will slow down after a certain period of use, and at that time the *Ranger* will boost its speed to good advantage. The usual method for accomplishing this purpose is to have the spacing of the shaver commutator points adjusted — a minor repair which any serviceman should be able to make while you wait.

The *Zipper's* action was variable. With some shavers it raised the voltage to as high as 146 volts; on others the rise was negligible. CU measured the *Zipper's* action on several brands of shavers (now being tested for a new shaver report). Most affected was the *Sunbeam*. The old model "R" had its voltage boosted to 146 volts, and the new "S" model to 126 volts, from a line voltage of 117. The new *Remington Five*, the *Collman*, and a *Schick Colonel* (single-head) were raised slightly or not at all.

Besides its ineffectiveness on some brands, the *Zipper* was "Not Acceptable" for other reasons. The construction is such that it is inconvenient to use. More important, to run a shaver at much above rated voltage is to invite a breakdown.

The utility of shaver batteries is doubtful. For camping trips, of course, such a battery is useful for those who can't use ordinary razors.

CU's tests revealed that the *Plug-in* shaver batteries were good for between ten and 20 shaves at a cost of 15¢ to 30¢ per shave. Ten shaves were squeezed out of one sample with a *Sunbeam* (model "R") used for ten minutes daily. But even within the first ten-minute span the shaving speed slowed up somewhat. By the end of the ten-day period the shaver motor barely turned. Running a *Remington Threesome* five minutes a day, a second sample lasted for 20 shaves. Again there was a daily decrease in shaving speed. Since the batteries CU tested weren't dated, there was no way of telling how long they had been lying on a shelf losing strength.

At least one company, Remington, will convert your shaver to six-volt operation for the sum of $1 to $3.50, depending on its condition. The shaver can then be used in your car — if you have a special electric cord costing $1.50. Or it can be used on any six-volt storage battery. If the shaver is converted for a camping trip, it will cost $1 to reconvert — a total outlay of $3.50 to $6.

Boosters for electric shavers

In the ratings below the prices quoted are those paid in New York City. Two samples of each booster were tested.

ACCEPTABLE

■ RANGER (Electronic Specialty Co., Los Angeles). $4.95. This booster operates by rectifying a-c into d-c, for which purpose it uses a selenium rectifier and an electrolytic condenser. It must not be left plugged in because the selenium rectifier draws some current even when the shaver is not plugged in. Well designed and neat in appearance; convenient to use. Cannot be used with shavers designed to operate on a-c only.

NOT ACCEPTABLE

○ ZIPPER (E. J. Scheribel & Co., Minneapolis). $5. This booster is supposed to operate by raising the voltage of the shaver. "Not Acceptable" because it may damage the shaver (see story). Ineffective on some brands of shavers, and inconvenient to use.

Shaver battery

ACCEPTABLE

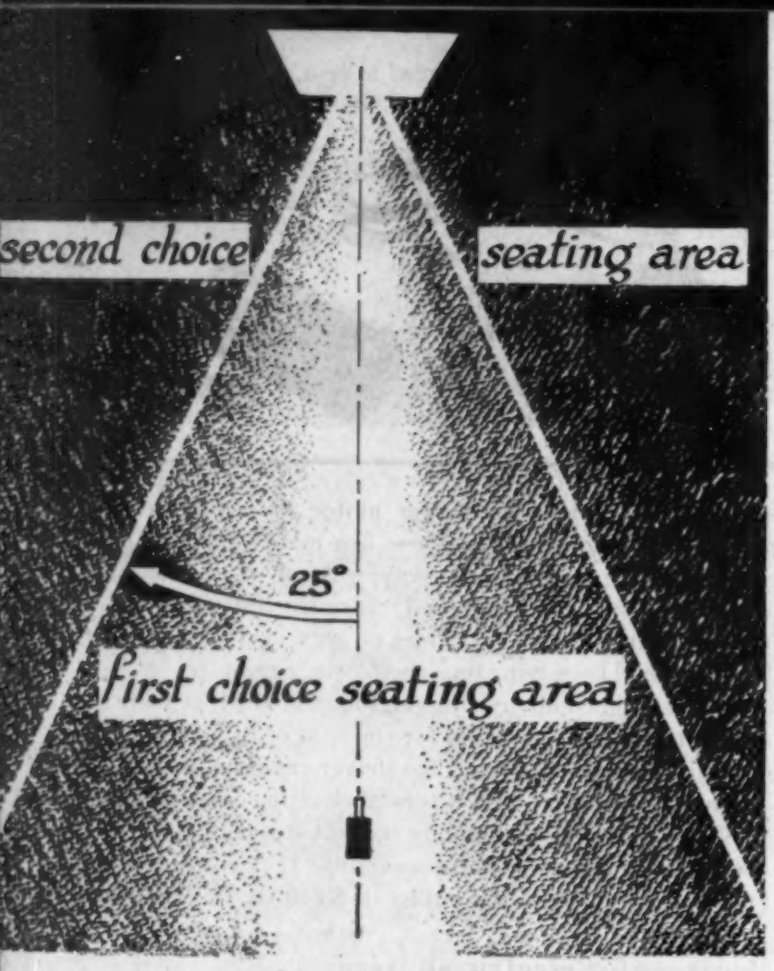
■ PLUG-IN (Bernard S. Greiff Co., San Francisco). $2.95. A 103½-volt battery consisting of 69 small individual tubular cells connected in series. Weight 1 lb. 5 oz. The battery in CU's two samples was manufactured by Ray-O-Vac and was not dated.

Ratings of commercial eliminators

ACCEPTABLE

■ COMMERCIAL CONTROL De Luxe (Gray Development Corp., Beverly Hills, Calif.). $4.95. Sold by mail by Commercial Control Company, Box 1001, Beverly Hills, Calif. Ten-foot extension cord from wall outlet to push-button control. Thermostat control and relay mounted in plug-in box.

■ COMMERCIAL CONTROL Junior (Gray Development Corp.). $1.95. Same as above except suction-cup timer mounted in the control box with two push buttons. Choice of brown, ivory and red colors for plastic case but furnished with non-matching brown rubber cord.



In arranging seating for beaded screen, remember image brightness drops 75% at about 25 degrees from center line

Slide and movie screens

Screens on which to show off your photographic achievements come in a variety of sizes, styles and surfaces. CU rates 13

Given a good picture and a good projector, you still need a good reflecting surface to take full advantage of what you want to see or show your friends. Walls, because of color or texture, are seldom satisfactory. Screens for home use are the best answer. They come in several types of mountings (tripod, wall, and box), in two types of screen surface (beaded and matte white), and in a wide assortment of sizes.

The thirteen models tested by CU ranged in price from $5.45 for the *Caspeco* wall model (30x40 inches), to $28 for the *Raven* Deluxe Automatic box model (36x48 inches). Your choice of mounting, surface, and size should depend on your needs, and on the space you have for showing pictures at home. Here is some background to help you in your screen selection.

As to mounting, tripod models are the most useful, although they are not always the most convenient to set up. But a good one can easily be carried and set up anywhere, and since the screen you buy will probably last many years, and during that time you will want to use it in a variety of places, in the long run the tripod mounting will probably be the most practical.

Wall models are low in price, but, unlike the tripods, require a wall on which to hang them, as well as nails, or a molding and some picture wire. Plaster walls which have no molding are hardly suitable for this purpose, because they are so easily damaged by nails.

Box models, which are the neatest and most convenient to set up and fold away, were the most expensive of those tested. To use them you need only the level surface provided by a table, box or chair, whichever will give you the correct height.

A novel type of wall-model screen now on the market consists of a 30x40-inch colored print of a popular painting, and a spring-roller mounted screen, concealed in the picture's frame. The screen can be pulled down over the picture when desired. This rather elaborate device is made by the Radiant Mfg. Co., and sells for $64.50. It appeared to CU a rather expensive way to get a screen.

Most models are available in several sizes of screen area, from 30x40 inches up. Prices quoted in CU's ratings are for 30x40-inch screens, except where otherwise noted. While 30x40 inches is generally a satisfactory size for the home and is suitable for all home movies, the 40x40-inch size, which costs about 25% more, offers the advantage of accommodating vertical as well as horizontal still pictures. In very long rooms, where the spectator may be at a considerable distance from the screen, it may be necessary to use screens larger than 40 inches wide. Generally the prices of 50-inch, 60-inch, and 70-inch screens are about 33%, 100%, and 175% higher, respectively, than those of the 40-inch screens.

A screen's effective picture area is usually about an inch shorter all-round than the nominal size of the screen, because of the black borders present on most mounted screen fabrics.

According to manufacturers' catalogs, screens are available in three types of surface: beaded (surface coated with very fine glass beads), matte white or white opaque (unbeaded flat white surface), and silver finish. Actually, CU shoppers found only the beaded screens generally available. They were unable to locate any silver screens in retail stores, and only one brand of matte or white opaque screens, the *Raven*. Brands have been rated, therefore, on the basis of beaded screen models only. The *Raven* white opaque screens, available in some stores, were slightly less expensive than *Raven* beaded screens. *Radiant* matte white screens were available on special order at the same price as that brand's beaded screens.

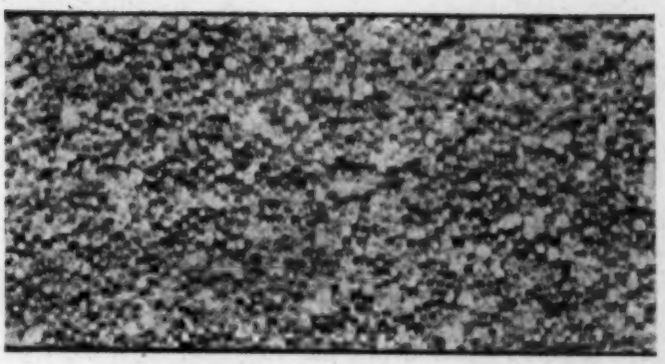
When viewed from directly in front, beaded screens produce much more brilliant images than matte white screens do. But the brilliance falls off very rapidly as the spectator moves to either side of center. When the spectator's viewing angle (the angle between his line of sight and a line perpendicular to the center of the screen) increases to 25 degrees, the brilliance of the image decreases 75%; and at 60 degrees, the brightness drops almost 90%.

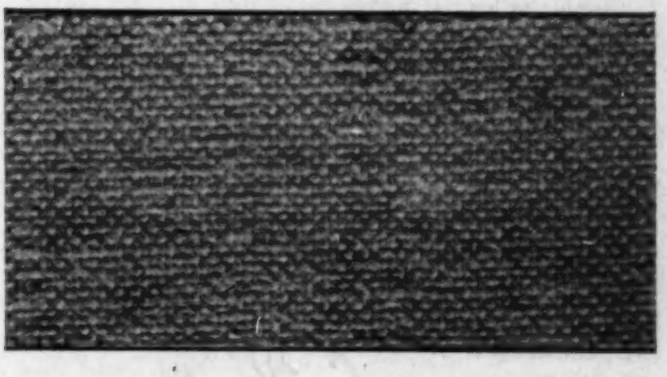
White opaque screens, viewed from directly in front, reflect only about 28% as much as beaded screens do under the same conditions. But the decrease in brilliance as the spectator moves to either side is much less than is the case with beaded screens, so that at angles greater than 27 degrees, the matte white or opaque screens are slightly brighter than the beaded.

The beaded screens tested were just about equal in brightness, but they differed considerably in texture. When pictures are projected upon beaded screens, the texture is usually discernible as a graininess of background. On most screens this graininess was not found objectionable unless the spectators sat close to the screen or viewed it from a wide angle.

The characteristics of beaded screens make them desirable if your audience can be seated mostly within a 25-degree angle on each side of the perpendicular to the screen. If most of your audience will be viewing the pictures from angles greater than 25 degrees, the white opaque screen surface may be more satisfactory.

Beaded screens tend to shed their beads to some extent. But limited shedding of the kind encountered in ordinary use causes no loss in brilliance, since there is a large excess of beads. White opaque screens are more easily cleaned than beaded surfaces. Because both screen surfaces will curl permanently if they become wet, wet cloths should not be used on them; wash them by rubbing gently with a soft cloth just dampened with a mild soap solution.





Beaded screens (above, magnified) were most readily available; they produce more brilliant images than matte white (below, magnified). Some beaded surfaces made pictures look grainier than others. Graininess was not objectionable

The color characteristics (whiteness) of all the screens examined were satisfactory. The only screen which was noticeably off-white was the *Britelite;* but its slightly yellow cast was not found to be objectionable.

How CU tested

CU tested the brightness of the screens at various angles up to 60 degrees by measuring the reflections of a light of constant intensity with a photometer. The aperture of the photometer was kept at a fixed distance from the center of the illuminated screen and was always pointed toward its center. The photometer sensitivity over the spectral range was adjusted to correspond with that of the human eye so that the brightness was measured as a spectator would observe it.

The whiteness of the screen surfaces was determined by visual comparison with a standard white block of magnesium carbonate. After 48 hours exposure to a standard carbon arc light in a Fadeometer, whiteness and brightness were rechecked. Most screens turned

whiter after the Fadeometer exposure; none turned darker or colored. Technicians examined the texture of screen surfaces by projecting blank and colored slides upon the screens and observing the graininess at various distances and angles.

Each screen was unrolled and re-rolled 600 times in order to test its durability. Most screens stood up well under this test, but several developed horizontal waves, or "ladders."

To determine the relative convenience with which the screens could be set up and put away, the required steps were performed several times with each one of them.

The factors considered in the relative ratings below were: durability of construction, method of fastening fabric to roll, rigidity and stability (in the case of tripods and box models), tensile strength of fabric, and workmanship. Convenience of use, the presence of a handle by which to carry the folded screen, and the possibility of losing parts, were also considered. Texture and effects of rolling and unrolling were also scored. Brightness and whiteness were not scored, since they were approximately equal for all beaded screens.

• • •

Ratings of screens

Listings are in order of over-all quality for each type of mounting. All screen surfaces tested were beaded; for discussion of other surface types, see text.

Tripod models

Nominal size 30x40 inches. Height adjustment was continuous except where noted.

ACCEPTABLE

■ RADIANT Model DL (Radiant Mfg. Corp., Chicago). $18.50. Very durable construction. Legs opened automatically by spring action; folding required a good deal of pressure. Rigid frame. Effective picture area 28x38½ in. Screen fabric sewed around spring roll and stapled, a very durable method of attachment. Also available with matte white surface.

■ DA-LITE CHALLENGER (Da-Lite Screen Co., Chicago). $15. Very durable construction. Easy to set up and fold. Rigid frame. Effective picture area 28½x38 in. Fabric stapled to roll; could be extended enough to pull loose. Vertical height adjustment permitted only four positions, total range 18 in. Graininess of screen surface more noticeable than on any other screen tested.

■ RADIANT Model Q (Radiant Mfg. Co.). $12. Light construction. Convenient to set up and fold. Frame not rigid; screen could be rotated fairly easily. Effective picture area 28x38 in. Fabric sewed around spring roll and stapled. Also available with matte white surface.

■ AURORA (Aurora Industries, Chicago). $14.69. Light construction. Convenient to set up and fold. Frame not rigid; screen could be rotated easily. Effective picture area 33x38 in. Fabric stapled to spring roll. Lowest tensile strength fabric of screens tested.

■ DA-LITE VERSATOL (Da-Lite Screen Co.). $10.50. Light construction. Convenient to set up and fold. Frame fairly rigid; screen could be rotated somewhat. Effective picture area 28½x38½ in. Fabric stapled to roll. Graininess of screen surface noticeable at moderate distances.

■ RAVEN Standard Tripod (Raven Screen Corp., NYC). $18. Medium to light construction. Not convenient to set up; three set screws must be manipulated. Frame not rigid; screen could be rotated easily. Elevating rod could be pulled out completely. Stability poorest of tripods tested. Effective picture area 29x39 in. Fabric stapled to spring roll; ample excess fabric minimized possibility of pulling screen off roll. Graininess of screen surface particularly noticeable from large viewing angles. Also available with opaque white or "halftone" surface.

Box models

Nominal size 36x48 inches unless otherwise noted.

ACCEPTABLE

■ BRITELITE (Britelite Distributors, NYC). $21.95. (Model tested by CU was 39x52 in.) These screens are no longer being made, but some may still be available. Well-constructed. Very convenient to open and fold. Excellent rigidity and stability. Effective picture area 39x52 in. Fabric stapled to spring roll; ample excess to prevent pulling off roll. Graininess of beaded surface smoothest and least objectionable of those tested, but screen had noticeable yellow cast. Low tensile strength fabric.

■ RAVEN Deluxe Automatic Box Model (Raven Screen Co.). $28. (Model tested by CU was 39x52 in.) Well-constructed; mounting appeared to be identical with that of *Britelite*, above, except that box had leather-covered corners. Effective picture area 39x52 in. Graininess of beaded surface very noticeable at large viewing angles. Also available with opaque white or "halftone" surface.

Wall models

Nominal size 30x40 inches unless otherwise noted.

ACCEPTABLE

■ RADIANT Wall Model W (Radiant Mfg. Corp.). $10. Light construction. Large rings, convenient to mount. Effective picture area 28x38½ in. Fabric stapled to roll. Also available with matte white surface.

■ DA-LITE Wall Model B (Da-Lite Screen Co.). $10. Light construction. Large rings, convenient to mount. Effective picture area 29x38½ in. Fabric stapled to roll. Wood batten loose in screen edge pocket on sample tested. Graininess of screen surface easily noticeable at moderate distances. Exceptionally high tensile strength fabric.

■ RAVEN Metal Case Hanging Model (Raven Screen Corp.). $10. Very light construction. Small rings, not very convenient to mount. Effective picture area 30x41 in. Graininess of screen surface particularly noticeable from large viewing angle. Also available with white opaque or "halftone" surface.

■ RAVEN Wood Roll and Batten Model (Raven Screen Corp.). $7. Available on special order. Screen mounted on wood roll and wood molding only; no spring roll or protective metal case. Must be rolled up by hand; not convenient to handle. Effective picture area 30x41 in. Graininess of screen surface particularly noticeable from large viewing angle. Also available with opaque white or "halftone" surface.

NOT ACCEPTABLE

○ CASPECO Wall Model (Camera Specialty Co., NYC). $5.45. Poor construction and workmanship. Spring roller mounted on wood strip, without protective case. Fabric stapled to roller at an angle, caused screen to roll up toward one side. Screen surface "laddered" severely after 200 unrollings.

Hand cleaners

(mechanics' soap)

The abrasives they contain get rid of dirt quickly, but are apt to be hard on the hands

Hand cleaners, or mechanics' soaps, won't remove all kinds of grease and grime quickly, as the ads claim they will, but they do clean a lot better and faster than ordinary soap. They do so because they contain an abrasive — a scouring agent that loosens the dirt so that the soap which is in the cleaner can do its job of emulsifying the grease and suspending the dirt particles. Since these abrasives are hard on the skin, however, hand cleaners should be used only when ordinary soap won't do the job.

CU has tested 19 brands of hand cleaners, of which four came in cake form, five in powder, and the remainder in paste. Choice is largely a matter of individual preference, although cakes and powders are somewhat easier to use than pastes. Pastes tend to dry out and harden unless they are kept well covered. And the more tightly the lid fits, of course, the harder it is to remove when your hands are greasy.

All of these cleaners have a gritty feel, caused by the abrasive they contain. But this grittiness is in no way a measure of harshness. Vegetable abrasives such as sawdust or corn meal may feel gritty when dry, but they are only mildly abrasive. Other abrasives used in the hand cleaners ranged from moderate mineral abrasives (diatomaceous earth and pumice) to harsh scouring agents (sand, feldspar, crystalline silica, etc.). A moderate abrasive is usually the best bet; some of the harsher ones may be injurious. An abrasive content of 25% is enough to loosen grime, although many of the cleaners tested showed a higher content than this.

Besides the abrasive, some cleaners also contained small amounts of alkaline salts to soften hard water and help cut grease. Soda ash is the salt most commonly used, but *Boraxo* contained a high proportion of borax, a soluble, mild alkaline salt, which acts as a mild abrasive only when the powder is in a dry or slightly moist state. Unless the hands are thoroughly rinsed, any alkaline salt leaves a residual film that tends to dry out the skin.

During the war, there was a marked increase in the number of brands of hand cleaner on the market and in the number of industrial workers who used them. At the same time, a marked increase in the number of cases of hand dermatoses (skin irritations) was reported by the medical profession. When used constantly, these hand cleaners often proved to be too rough on the skin; and then, when the hands became chapped, exposure to certain chemicals induced a dermatitis. In some cases, harsh hand cleaners have been found to be the sole cause of occupational dermatitis.

It is always a good idea to apply cold cream or lanolin after using a hand cleaner; but those who have very dry skin would do well to avoid the cleaners entirely.

There are a few ways of eliminating the need for any sort of hand cleaner. Gloves are a nuisance, but they can be used for some jobs. Dirt will not collect under the nails if they are first drawn over a cake of soft soap. Still another preventive, and perhaps the best, is a protective covering or cream.

Hand cleaners are ineffective for oil paint, nicotine, or fruit stains. Oil paint is best removed with turpentine or kerosene applied with a dampened cloth to the soiled spot. This practice, as well as the use of solvent types of hand cleaners should be avoided whenever possible.

Continued on next page

HUBERE COSMETICS: AN EXPLANATION

In May, under the heading "Some recent consumer protective actions by . . . the Food & Drug Administration," the *Reports* listed an F&DA action against Hubere Cosmetics. F&DA had found that *Hubere Hair Lacquer* and *Hair Lacquer Pads* contained a poisonous substance which might have made them injurious to users.

The action itself was correct as reported. But in fairness we should point out that it was the government's release of the information on the case that was "recent," not the government action against the product. The complaint was limited to pads sold during the summer of 1943; the court action took place in May, 1945, at which time the company was fined. But at the time of the complaint, in the summer of 1943, the company had voluntarily withdrawn the suspected merchandise from the market. There have been no complaints against the company since that time.

The F&DA actions noted in "For the People" are based on F&DA Notices of Judgment when and as they are released — and that is usually some time after the action has taken place, as it was in this instance.

Finally, a word about the frequently encountered claim that hand cleaners are useful for scouring sinks, basins, enamelware, etc. CU found the harsher ones too abrasive for such uses.

How CU tested

The determination of soap content, amount and character of abrasive, and alkalinity constituted the most important laboratory tests. Here the four cake cleaners had an over-all advantage: they were high in soap content (60%), moderate in abrasion, and low in alkalinity. Pastes contained the lowest percentage of soap, approximately 10%.

Abrasive content ranged from 20% to 80%; on a dry basis, the greater the amount of abrasive, the lower the soap content. The type of abrasive was identified from the water-insoluble material, and its degree of abrasiveness was tested on an abrasion machine. Cleaners are divided in the ratings into "moderate" and "harsh."

Alkalinity was determined as both total amount of alkaline salts present and intensity of alkalinity (pH) in a 1% aqueous solution. All cleaners, with the exception of those containing borax, had less than 5% alkaline salts — the cake cleaners contained least. *Kleenz Deep* and *Shur-Fine* were judged to be excessively alkaline, and were therefore rated "Not Acceptable." *Onco* was also judged to be "Not Acceptable" because it contained excessive solvent. *Kleenz Deep* seemed to be a wartime substitute for soap; it consisted primarily of sawdust and a small amount of harsh alkaline salts. Appreciable amounts of borax in mechanics' soap are not objectionable, since borax is a mild alkaline salt.

The packaging of the cleaners was also noted. Seven of the pastes came in cans with tightly fitting press lids. Three of the powders, which are, in general, easy to dispense, came in cardboard containers with metal tops and bottoms; *Boraxo* came in an all-metal can, and *Kleenz Deep* in a poorly sealed, all-cardboard container.

• • •

Ratings of hand cleaners

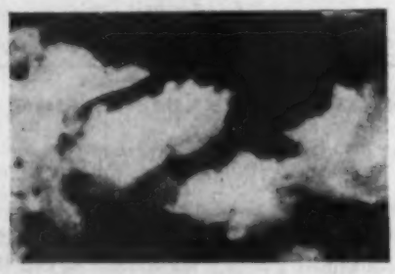
Listing is in order of increasing cost per dry ounce within each group. Figures in parentheses represent cost per dry ounce. Prices vary, however, from city to city, and store to store.

ACCEPTABLE

Moderate abrasion

Cakes

■ PEET'S MECHANICS SOAP (Colgate-Palmolive-Peet Co., Berkeley, Calif.). 6¢ for 7 oz. (0.9¢).



1.

Abrasives ranged from mild ones, like sawdust . . .

2.

. . . and clumps of fine pumice, to harsh abrasives, like . . .

■ ANVIL PUMICE SOAP (Los Angeles Soap Co.). 5¢ for 3½ oz. (1.5¢).

■ CO-OP PUMICE SOAP (National Cooperatives, Inc., Chicago). 6¢ for 4 oz. (1.6¢).

■ LAVA SOAP (Procter & Gamble, Cincinnati). Medium size. 9¢ for 4 + oz. (2.3¢).

Powders

■ GREASE-OFF Hand Cleaner (Kay Tee Products Co., Brooklyn). 13¢ for 10 oz. package (1.3¢). Cornmeal-type vegetable abrasive.

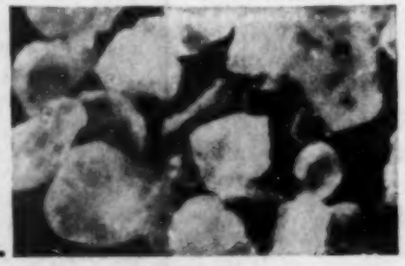
■ BORAXO (Pacific Coast Borax Co., NYC). 13¢ for 8 oz. can (2.1¢). Contained large amount of borax which acts as mild abrasive only when dry or slightly moist.

Pastes

■ BRIGHT SAIL HAND SOAP (A&P). 20¢ for 3 lb. (1¢).

■ MIONE HAND SOAP (Mione Mfg. Co., Collingdale, Pa.). 10¢ for 1 lb. (1¢).

■ JOHNSON'S KWIX (Johnson-Day Co., Oakland, Calif.). 23¢ for 19-oz. jar (1.7¢).



3.

. . . feldspar. These photomicrographs magnify 50 times

■ PDQ MECHANICS CLEANSER (Davis Soap Co., San Francisco). 16¢ for 30 oz. (1.8¢). Contained wood-meal-type vegetable abrasive plus small amount of mineral abrasive.

Harsh abrasion

Powders

■ DIF HAND CLEANER (Dif Powders Corp., Garwood, N. J.). 16¢ for 10 oz. (1.7¢).

■ HANSLICK (Solar Products Co., Chicago). 19¢ for 8 oz. (2.5¢).

■ GRE-SOLVENT (Utility Co., NYC). 28¢ for 3 lb. (1¢).

Pastes

■ YOUSE (Larkin Soap Co., Teaneck, N. J.). 10¢ for 1 lb. (1¢).

■ MECHANICS' PASTE SOAP (Larkin Co., Buffalo). 24¢ for 24-oz. can (1.4¢).

■ SKAT HAND SOAP AND KITCHEN CLEANER (Skat Co., Hartford, Conn.) 12¢ for 1 lb. (1.4¢).

NOT ACCEPTABLE

○ KLEENZ DEEP HAND CLEANER (William Oliver Co., San Francisco). 13¢ for 6-oz. box (2.4¢). Powder contained sawdust and alkaline salts. Showed excessive alkalinity.

○ ONCO HAND CLEAN (G. W. Onthank Co., Des Moines). 40¢ for 10-oz. jar (20¢). Cream paste contained soap and turpentine which is not desirable for general hand-cleaning use. No abrasive present. Would be "Acceptable" for occasional use.

○ SHUR-FINE SOAP (Shur-Fine Soap Mfg. Co., Long Beach, Calif.). 39¢ for 20-oz. jar (27.9¢). Soap paste contained alkaline salts. Showed excessive alkalinity. No abrasive present. Sold as water or waterless cleaner.

Some notes for the pound-wise driver

THE CLUTCH: CARE & HANDLING

Your automobile would probably last a lot longer and perform better if you knew more about the care and handling of some of its components. Also, the more you know about such things, the less likely you are to fall prey to the over-zealous repairman. CU plans to discuss some of these components from time to time, beginning with the clutch — a unit that deserves better treatment than it usually gets.

A clutch has two functions: (1) to disconnect the engine from the rest of the driving mechanism so that gears may be shifted or the car stopped with the engine running, and (2) to cushion the application of engine power, particularly when starting from rest, by slipping. While it slips it turns power into friction and heat, and it can do just so much of this before wearing out its friction linings. These are replaceable, but excessive slipping will ruin other more expensive clutch parts by overheating them.

Rule number 1, therefore, is: When starting up, coordinate foot throttle pressure and clutch engagement so that the clutch slips as little as possible.

As a clutch wears, the normal clutch pedal position rises, until finally full engagement is prevented by contact with the underside of the floor. When this happens, the effect is the same as riding your foot on the pedal — it causes the clutch to slip slightly all the time. So rule number 2 is: Check the clutch frequently by depressing the pedal with one finger to see that there is at least one inch of free play before the clutch starts to disengage. Occasionally, with extreme wear of the throwout bearing, the pedal position will become so low that the clutch will not disengage fully, and the bearing must be replaced.

This is all the maintenance most clutches normally require, although *Hudson* clutches run in oil and need periodic refilling. Occasionally some means is provided of lubricating the bearing against which the clutch runs when the pedal is depressed. Usually this bearing is pre- or self-lubricated; if it runs dry or becomes noisy, an ingenious mechanic can usually figure out some way to grease it without taking the entire clutch apart. Over-lubrication, or oil that is leaking from the engine, from a fluid coupling or from some other source onto the clutch linings, will make it engage poorly or slip.

When you can no longer maintain free play in the clutch pedal, and the clutch — its cushioning power lost — grabs suddenly in picking up the load, the time for repair is near. In a little while, the clutch will start to slip all the time, and some day soon you may not get home. Repair requires removal of the clutch and refacing or replacing of the plates. This is an operation costing $25–$50. It usually requires special tools, and a repairman with considerable skill and a clean shop — some clutches are so sensitive that even greasy fingerprints on the lining will cause them to slip when assembled.

GAS GADGET

Because gasoline accounts for the motorist's chief and most frequent out-of-pocket expense, a steady flow of gadgets reaches the market for "saving" gasoline. Such devices usually are also claimed — why be too modest? — to add power, remove carbon, reduce carbon monoxide, save oil, and make life happier in general.

Such a device was *Vacudex*, marketed in 1942 and thereafter. You simply clamped it on your car's tail pipe, sat back, and prepared to count your gains. CU tested *Vacudex* (see *Reports*, September 1942) and was not surprised to learn that gas mileage with or without it was the same. By August of 1947, the Federal Trade Commission reached the same conclusion. It has now warned Decker Products Corp., the manufacturers, to discontinue its gas saving (and other downright silly) claims.

There are, in fact, only two ways to save gasoline with a particular car:

1 Tune the fuel and ignition systems to their original efficiency, and confirm with an exhaust gas analyzer that you have a correct, lean mixture.

2 Drive more economically (some suggestions on how to do this will be found in the August *Reports*). If you really want maximum economy, regardless of loss of power, you don't need a gadget — just use a light foot on the accelerator. Cost, $00.

Road maps: a correction

CU's "Summer Touring" article (*Reports*, June) stated incorrectly that, of the road maps put out by companies, only *Texaco* maps cover the entire United States. We find that several oil companies give this service, *Shell*, *Socony*, *Conoco* among others. There are some companies, however, whose maps do not cover all 48 states. *Esso* maps, for instance, cover only 18 eastern states.

For the flowerpot gardener

CU's consultant has some things to say about an often overlooked factor — the container

Before the first fall frosts set in, the house plant season starts. This, then, is the time to bring plants in from their summer quarters, and repot those which were not attended to in the spring. Plants that spent the summer indoors, without the advantages of the outdoor life, should be carefully inspected, and the unpromising discarded; any that are crowded or in need of fresh soil should be repotted.

An important factor in growing house plants successfully — and often an unsuspected one — is the plant container itself. Florists grow plants in porous red clay pots standing on a surface that is moist enough to keep the pots continually damp. Reproduce this condition for house plants, and porous clay pots will continue to be as satisfactory at home as they were in the greenhouse.

More often than not, however, house plants are placed on a dry surface. The result is that moisture impregnated with plant nutrients flows continually from the ball of soil around the plant roots to the outside surface of the pot, where the moisture is evaporated. No air humidifying device will remedy this condition; the only remedy is to keep the pot on a moist surface. If this is not done, the roots will follow the flow of water and plant food, and form a layer against the inner surface of the pot, where they are subject to injury if the pot dries. Moreover, each time the plant is watered, care must be taken to soak the plant until water runs out of the pot's drainage hole; otherwise the roots in the lower part of the pot are liable to dry.

When a porous pot stands on a damp surface (but not *in* water), it draws the moisture which it requires for evaporation from beneath, instead of taking it away from the plant. As a result, there is a uniform distribution of nutrients in the soil around the roots, the roots themselves are not attracted to the outside, and the plant grows better and blooms more freely. The plant still has to be watered whenever the soil is dry, but watering is not needed as often as it would be were the pot standing on a dry surface.

To keep the surface moist

A good arrangement for providing a moist surface in the house — but one that may not be possible to achieve these days — consists of a watertight, rustproof tray made to fit the window sill or some other surface. Plumbers and roofers used to be willing to make such trays, but it is difficult to have one made now, and none is known to be ready made. A window box with tight metal lining (though not as convenient as a tray) can also be used to keep porous pots damp. Put a layer of sphagnum moss, or a plant mat for each pot in the bottom, and keep this lining moist as you would with the tray. In addition, sphagnum moss may be packed around the pots, but make sure that no pots are left standing in water whenever it is added.

Window boxes

Window boxes demand a careful arrangement of plants for effect; miscellaneous collections of one of a kind are not suitable. Remember that a solid, quiet color is usually the best foil for flowering plants; a good-looking container may turn out to be a poor choice if its color or design competes with the flowers. For "foliage" plants, however, this is not such an important consideration.

For individual plants in porous clay pots, good-sized saucers, glass pie plates, or little trays may be used with sphagnum moss or plant mats, kept moist. Several small pots may be grouped on a tray or big pie plate with good effect. The wider the container the better. Or the pot may be set in a jardiniere or other watertight container. But these must be watched, like window boxes, to make sure that standing water does not touch the base of the pot.

Sometimes plants come from the florist with the pots wrapped in tin or lead foil. Leave this in place. It serves not only to conceal a grimy pot but to prevent its drying. The foil is, in effect, a substitute for an impervious container.

Impervious containers — tin cans, painted clay pots, metal and glazed pots — have the same advantages for plants as moist clay pots do; because the process of repotting is a shock to new plants, however, a new plant in bud or in bloom should be left in its clay pot until it has finished its first season. That old idea, still firmly held by many people, that porous pots allow air to reach the roots through the pot wall, has been proved fallacious. Air reaches the roots only through the surface of the soil and the drainage hole, in any kind of pot. Less frequent watering is required for plants in impervious

containers, but zealous indoor gardeners who have been accustomed to thirsty, porous pots may overwater if they automatically follow a regular schedule of daily watering instead of waiting until the plants need it. Most plants should not be watered until the soil is dry and crumbly at the surface. This insures the necessary aeration of the soil.

Glazed pots are relatively expensive and do not come in all shapes and sizes. But anyone can paint a clay pot or use tin cans. Before painting flowerpots, scrub them well with soap suds and dry them in the sun for a few days. Enamel is the best paint to use, because it is easy to wipe clean. It must be applied to the whole surface of the pot; inside and out; if any part is missed, moisture from inside the pot will loosen the paint.

Tin cans have several advantages. They contain more soil than tapered pots of the same height and top diameter, and they are not easily broken. Painting inside and out with an asphalt or metal paint makes them last longer. If left unpainted, food tins usually last only one season; lead-coated tins of the kind used for motor oil are more durable.

Whether painted or not, tin cans require some preparation. Nail holes for drainage openings should be made around and just barely above the bottom rim — not in the bottom of the tin. No drainage material is needed if the holes are on the outside of the can rather than underneath it.

No drainage hole is required in any plant container if plenty of drainage material (pebbles, pieces of broken clay pots, etc.) is put in the bottom and watering is done very carefully. However, it takes experience to water just enough but not too much when there is no drainage opening. (If your finger becomes wet — not merely moist—when it is pressed on the soil, you've watered too much.) For the inexperienced window gardener: beware of flowerpots without drainage openings.

A very effective arrangement can be made for a plant window with simple glass shelves fastened at intervals above the sill line, and a bracket for a flowerpot on either side of the window frame. A wooden extension will make a narrow sill wide enough for sizable plants, and wire strung around the window will support a vine.

Such a window can be the principal decorative feature of a room, but unfortunately this is not a simple sort of project. The sill extension requires some carpentry, since such things no longer come ready made, and suitable glass shelves are hard to find. The glass should be ¼ of an inch thick for short spans, ⅜ of an inch for three-foot spans.

Plant shelves are best used to display a few choice small plants. They should never be crowded with pots, for they are not made to bear much weight, and a plant is surprisingly heavy just after it has been watered. But this arrangement takes advantage of extra window area and can be both interesting and attractive.

CHECK-LIST FOR FLOWERPOT GARDENERS

To get an idea of available materials and their costs, CU shoppers have collected some information on New York sources of equipment for flowerpot gardeners. Prices given here would probably be about the same in other cities.

WINDOW BOXES: These came in a variety of sizes, materials, and designs. They ranged from 24 inches to over three feet long, and cost all the way from $1.79 to $35. Wooden boxes, and ordinary metal ones, 30 inches long with painted decoration, cost from $1.79 to $3.69 at Macy's. There were also attractive metal-lined containers of green wire mesh decorated with red and white metal tulips. These came in both 24-inch and 30-inch lengths, and cost $6.98 and $8.98. A floor model that holds four medium-sized pots cost $10.79. Copper window boxes of all shapes and sizes, were $15 to $35.

JARDINIERES: Good-looking ones were expensive. Prices started at about $5, and round containers of hand-painted metal from eight to ten inches deep and with metal linings, were $8.50. In one store, a ten-inch decorated wire basket with a metal lining cost only 99¢.

FLOOR STANDS AND WALL BRACKETS: The most popular type, which cost from $3.50 to $100, was fitted with rings in which the pots hang. This is completely unsatisfactory for porous pots because there is no way to make up the water loss from the surfaces. In such an arrangement, impervious containers are always a necessity.

PLANT MATS: CU recommends the *Mystic Mat*, made by Bird & Son, of East Walpole, Mass. The mats consist of star-shaped pieces of wall board, minus the waterproofing, and come in two sizes. Two 5½-inch mats, or three 3½-inch mats cost 10¢. These mats for porous pots should be used in a plate or other container on which the mat can lie flat. If the points are bent up, drainage is poor. It is necessary to add water to reach almost to the top surface of the mat every day, and to continue to water the plant from the surface of the soil as usual.

SHELVES AND BRACKETS: There were single, double, and triple shelves, with more or less elaborate brackets, which could be fastened to the window sash. Most, however, were double shelves, from 14 to 22 inches long. The shelves were usually held together with glass or plastic bars, or metal or plastic brackets. Sears, Roebuck & Co.'s catalog number — 9626 at $1.69 was a good buy; it had two glass shelves, about seven inches apart, 20x4 inches overall, with graceful, white enameled brackets. Catalog number — 9560, a single, 20-inch shelf in this style, cost 79¢. Montgomery Ward's catalog number — 4762-L, a double glass shelf, 18 inches long with plastic rods, cost $1.49.

GLAZED POTS: These ranged from about 50¢ to about $2.

HEALTH & MEDICINE

HAROLD AARON, M. D. — MEDICAL ADVISER

A Syrian settler in Egypt, about 1200 B.C., shows a typical polio deformation. We had our first polio epidemics 40 years ago

POLIO

A true preventive has yet to be developed, but there are some measures you can take

The late summer and fall months are always associated with a certain amount of anxiety among parents. For it is in these months that poliomyelitis, or infantile paralysis, appears.

There is no way of telling whether it will come as an epidemic or, if it does, in which community it will strike first or most severely. An occasional case crops up in almost every community every year at about this time, without causing much alarm. It is when the number of cases increases that tension rises. Then there are demands for action, and, under such pressure, public health departments may issue proclamations closing schools, and forbidding the use of swimming pools. Swamps and stagnant pools may be drained, and neighboring communities may even refuse entry to persons from "infected" areas.

Unfortunately, an effective preventive campaign will be possible only when we know more about the ways in which the virus of poliomyelitis survives in nature and how it enters the human body; and when, above all, an effective method of immunization is discovered.

We do know that the disease is caused by a virus which is extremely small — its diameter is probably about one ten-millionth of a millimeter. It is fairly stable and can survive for many weeks outside the body. But it can grow and multiply only within the interior of a living cell — a characteristic that it shares with other viruses.

Studies by Dr. Albert Sabin and associates have shown that the poliomyelitis virus in an infected person is found in the tonsillar-pharynx region, the lining of the small bowel, the contents of the small and large intestines, and the spinal cord and brain. The presence of the virus in the throat and bowels usually causes no symptoms. It is only when the virus attacks the cells of the spinal cord and brain that signs of damage to the nervous system appear, and diagnosis then becomes fairly certain.

Thus, the two systems of the body attacked by the virus are the alimentary tract (which includes tonsils and pharynx) and the central nervous system. It seems probable that the virus enters the body through the mouth, invades the throat and intestines, and then spreads via the nerves to the central nervous system itself.

It is curious — and important — that in most cases the polio virus remains localized in the alimentary tract without further invasion of the body. Thus, many children and adults are infected by the virus but few actually become paralyzed. According to Dr. F. M. Burnet, a leading investigator of viruses, "It is probable that even in the most severe epidemic not more than one in ten

of the susceptible children who are infected will show signs of paralysis." Some believe that for every case of paralysis there are 100 to 1000 cases infected, but without paralysis. The non-paralytic cases may have mild gastro-intestinal symptoms, a slight indisposition, or no symptoms at all.

Polio and tonsillectomies

Research has been unable to disclose why one child will become paralyzed while 10 to 1000 others infected by the same virus will simply show trivial symptoms. It is certain that all infected children will have the virus in their tonsils or throat. It is also certain that injury to the throat will lower resistance and permit invasion of the body from the throat to the nervous system. *Perhaps one of the most important measures for preventing poliomyelitis is to avoid subjecting children to tonsillectomy during the late summer and early fall months.* This is a rule that could well be followed not only during epidemics, but even during non-epidemic years, since sporadic infection probably occurs every year during late summer and fall. Only emergency throat operations should be performed at this time; and tonsillectomy is almost never an emergency operation.

Whether fatigue or nutritional deficiency plays any part in increasing susceptibility to paralysis is uncertain. It would be wise, on general principles, to keep children from excessive physical activity and to encourage good nutrition during an epidemic. There is absolutely no evidence, however, that increased intake of any vitamins will in any way raise resistance to polio. A constitutional or genetic factor may have more to do with determining the *result* of infection than any other factor except age.

When polio epidemics first made their appearance in the United States some 40 years ago, about 90% of all cases occurred in children under five years of age. The designation "infantile paralysis" was then apt. Today, however, more paralysis occurs in the age group from five to nine than below five, and in many parts of the United States about one-fourth of all patients are in the ten- to 19-year age group. The disease cannot now be truly called "infantile" paralysis.

Several theories for this change in age incidence have been suggested — but none offers a really satisfactory explanation. Nor is there a satisfactory explanation for the occurrence of an epidemic. It is noteworthy, for example, that epidemics tend to occur in countries with high standards of living and excellent sanitation such as the United States, Sweden and Australia, whereas in Asia, a case of polio is a rare occurrence.

How the polio virus is spread is another controversial issue even among experts. Talking or breathing results in the expulsion of insignificant numbers of the virus. Nose-blowing, however, contaminates the hand with large numbers, whether or not a handkerchief or tissue is used. The virus is then spread to food or clothing or to another person's hand. Since the throat and not the nose is the site of the polio virus, and since colds, coughing and sneezing are infrequent in poliomyelitis, it is very doubtful that so-called "droplet infection" could be a major means of spreading the virus from one person to another. Thus, the use of ultraviolet light radiation in schools and homes, or spraying them with glycol antiseptics, will have little influence in curbing infection.

The most important vehicle of the virus is the feces, where the virus remains longer than it does in the throat. And some precautions are necessary to insure against fecal contamination of hands and clothes. Hand washing after a bowel movement, always sound personal hygiene, is doubly important during an epidemic period. Handshaking should be minimized, and hands should always be washed before handling food, dishes, and clothing.

Clothes and bedding do not have to be obviously soiled with feces to be a potential source of the virus. Dr. Thomas Rivers of the Rockefeller Institute, a foremost investigator of virus disease, is of the opinion that "many persons and their clothes are invisibly but dangerously contaminated with feces." He cites an experience he had investigating hookworm disease in Guam. "From a small cotton blanket on which an infant with hookworm had rested for 24 hours, and which showed no visible evidence of fecal contamination, 20,000 infective hookworm larvae were obtained. . . ." Thus, persons ill with polio, or the more numerous persons who are infected and never become ill, discharge large amounts of virus in their stools and this virus may reach clothes without betraying any evidence of fecal material.

Since virus is also found in sewage, it is not difficult to understand that flies may play some role in the dissemination of the virus, during epidemics at least. Spraying of homes with DDT and the use of screens are advisable. However, measures aimed at mass destruction of flies by spraying DDT from an airplane have not seemed to have any effect on them.

Measures for safety

Careful personal hygiene is a useful measure for safeguarding individuals and families.

Any child ill with fever and headache during the polio season should be isolated from the rest of the family until a definite diagnosis is made. As for communities, whether or not schools, theaters and pools should be closed during an epidemic will depend upon the dimensions of the epidemic and the judgment of public health authorities. When an epidemic is caused by a particularly virulent strain of virus, restrictions on the movements of children are justified, as in the case of the 1937 epidemic in Melbourne, Australia. There the spread of infection was slowed down, especially in the well-to-do sections of the city where isolation of children was more

effective than in the crowded districts. The present housing situation in the United States would make isolation of children of lower income families difficult or impossible should a severe epidemic occur.

At present there are no vaccines or drugs available for prevention or treatment of poliomyelitis. The value of convalescent polio serum or immune human globulin for treatment of polio cases has not been established. The use of pooled convalescent serum is considered inadvisable because of the danger of transmission of infective serum jaundice.

However, as Dr. Burnet points out, the factors that characterize polio epidemics seems to be "changing under our eyes almost independently of specifically medical action . . . and if we can continue progress in the better aspects of modern civilization they may all disappear before we have had time to understand them." Under better aspects of modern civilization one may stress, most notably now, decent housing.

Meanwhile, it may be a consolation to know that the ultimate outlook for children who are sick with polio is quite good. In a series of 296 cases recently reported from Baltimore, for example, 50% recovered completely, and 29% regained practically normal movement of the limbs. Only in 21% was there persistent paralysis.

The treatment of poliomyelitis, the controversy over the Kenny treatment, and the use of orthopedic measures will be subjects of a separate article.

School health exams

Public action is needed to raise the standard

Each fall, at the start of the school term, it is customary for school officials to ask each child to submit to a routine physical examination. The purpose of such examinations, to detect defects and disabilities so that they may be corrected by proper medical treatment, is praiseworthy. The results are usually something else again. Such school physical examinations are notoriously so inadequate that even obvious physical defects are often not uncovered.

This opinion of the usual school health examination is shared by many public health authorities.[1] Physicians and welfare workers who have studied medical care in the United States have learned that despite these routine school examinations, children get as poor diagnostic service and medical care as the rest of the population.

CU's medical adviser remembers school health examinations at which he served some years ago, and can testify to their futility as a method of uncovering physical defects. The principal of a school would call up the local medical society and request the services of several physicians. The medical society secretary would call up a number of physicians and solicit their help. The children would be lined up in the gymnasium, each deposit a quarter on a desk as a fee, and then get a five- to ten-minute examination (there was no time for more) in which only the grossest defects could be noted.

The results of such methods are just what would be expected. For example, it is partly because school examinations have always been conducted with so little regard for good medical practice that Selective Service findings revealed so "many neglected physical and mental inadequacies which could and should have been prevented and corrected in childhood."[2]

The initiative for undertaking a real school health program has come not from medical societies or private practitioners, but from public health officials and organizations. Thus, the Bureau of Child Hygiene of the New York City Department of Health has been engaged in making pilot studies of children in several elementary schools. School doctors, nurses, teachers and parents have been cooperating to make the plan a success.

In the study, each child is interviewed individually, together with a parent. Health problems and attitudes, the nature of the family life in the home, and previous medical history are elicited for review. The interview is followed by a complete physical examination, including the use of an ophthalmoscope. Weight and height, tests of visual acuity and audiometer tests for hearing loss are taken from teacher recordings on the school

[1] *See editorials,* American Journal of Public Health, *Oct. 1944; Nov. 1945; July 1947.*

[2] *"Health Needs of School-Age Children and Recommendations for Implementation,"* School Life, *Nov. 1945.*

medical record. A hemoglobin determination is performed, and urine is tested for sugar, albumin and sediment abnormalities. The interview and examination together take about 40 minutes for each child.

In addition to the physical examination, an attempt is made to appraise mental health. In New York City, the Bureau of Child Guidance of the Department of Education is set up to care for emotionally disturbed children and to work with the teachers, hospital clinics and social agencies to which these children can be referred. Yet, in the richest city in the world, all these facilities are overburdened and able to reach only a small fraction of the children who need care. Furthermore it will not be possible for private practitioners to absorb much of this load until they receive better psychiatric training than they have now.

Public action to effect changes in school health programs should be vigorously supported by the medical and public health professions. And parents through Parent-Teacher Associations and other groups are the logical leaders for such public action; it is the health and happiness of their own children that are at stake.

Post-delivery rest **Early "ambulation" is helpful to both mother and child**

Women who have just had babies are now being encouraged by their doctors to get out of bed as soon after confinement as possible. The traditional two weeks in bed is giving way to an elastic two to seven day period, provided, of course, that the delivery has been normal. Normal physiological conditions are more quickly restored by early "ambulation" than by prolonged bed rest. And blood clots in the veins are also less frequent.

Early ambulation is advantageous to the infant as well as to the mother. It reduces the period of separation of mother and child. Modern pediatrics and psychiatry stress the great importance for future wholesome personality development of intimate and continuous contact between mother and child. Hospital routine makes it difficult or impossible for the mother to take care of the child as much as is desirable.

The hospital is geared primarily for the quick and efficient handling of delivery and less for the proper care of infants. The rigid routine and technique of the delivery room is too often transplanted to the nursery. Formulas are prescribed for the feeding of the infant at prescribed intervals, and often there is little encouragement to the mother to breast-feed the baby. The babies are brought to the mother at fixed intervals and are allowed to remain for limited periods.

The sacrifice of maternal and infant needs to hospital needs would not occur if more obstetricians and pediatricians realized the great value of suckling to both mother and child. Doctors should insist on more liberal routine during the hospital stay. It is vain, however, to expect that mechanical hospital attitudes will soon be overcome. Families should, therefore, welcome the new attitude of doctors toward early rising from bed. Early ambulation enables the mother to leave the hospital earlier and to give the child the love and the individualized attention that it needs and cannot get in a hospital. If a mother must stay in the hospital for prolonged periods, she should try to have her baby in her room a large part of the time. This is, of course, possible at present only in private rooms.

Doctors are recognizing more and more that a hospital should be the last and not the first resort for the care of a sick baby. Whenever possible the baby should be treated at home, where it can get the interest and the attention it needs. Nurses cannot be expected to take the place of a mother; they have neither the time nor the incentive to give the babies the loving attention they require.

Dr. Harry Bakwin, Associate Professor of Pediatrics at N. Y. University College of Medicine, has pointed out that pediatricians are realizing that an unnecessarily high mortality rate among babies in hospitals may be largely affected by emotional deprivation. "Rigid segregation for infants and young children is still the rule in most baby hospitals or wards," he says. "Meticulous care is given to the dietary needs . . . even when the infant is to remain in the hospital for only a few days, yet no attention is paid to psychologic needs: Parents are carefully excluded and the babies are handled by doctors and nurses as little as possible. There is need for a fuller appreciation of the results of emotional deprivation in hospitalized infants."

HELP FOR THE CHILDLESS

Following the publication in the July *Reports* of "Children for the Childless," an article that had to do with infertility, several readers have written in to ask for information on the location of clinics, etc. CU suggests that those who are interested in obtaining help with such problems communicate with the Planned Parenthood Federation of America, Inc., at 501 Madison Avenue, New York 22, and request its list of infertility services in clinics and hospitals, or the names of private physicians qualified to give advice and treatment.

TRUE OR FALSE?

1. Your blood pressure level is an accurate index of your state of health.

2. "Normal" blood pressure equals your age plus 100.

Too often a patient is told his blood pressure reading without being given any explanation as to its significance. It is unfortunate that doctors so often choose to give this bare information as an important item in the physical examination; to many patients it becomes the most important finding in the examination. How often have doctors heard patients say "I've got low blood pressure," when the blood pressure apparatus registers a systolic pressure of 100 or 110; or "I've got high blood pressure," when a single recording, possibly during a state of nervousness, registered 160 or even 140.

Normal blood pressure does not equal one's age plus 100; if it does, this is coincidence, pure and simple. In the first place, there are two elements to a blood pressure determination: the systolic (contraction) pressure, and the diastolic (dilation) pressure, the latter being as significant as the former, sometimes more so. A normal systolic pressure may range from 90 to 140. A normal diastolic pressure may range from 60 to 90. The wide range occurs because of normal fluctuations in the conditions that affect the blood vessels and heart.

For example, the amount of rest preceding a reading may affect the systolic blood pressure; after a night's sleep and while a person is still in bed, the reading may be 10 to 40 points lower than at the end of an active day. Fatigue or mental depression is often associated with a systolic blood pressure of less than 110. With more rest and a better mood, the pressure may rise. Also, one's blood pressure may be higher in a doctor's office than it would be in a situation where the individual feels less apprehensive.

Even when the blood pressure level is persistently high — above 150 or more — there is no evidence that this interferes with health or with usual pursuits and activities. It is only when the elevated blood pressure is associated with changes caused by disease in the blood vessels, heart, kidney, or brain that health is threatened.

As for "low" blood pressure, in most instances it is entirely within the normal range, and is called "low" simply because it is less than "age plus 100." True low blood pressure or hypotension is quite uncommon. Symptoms such as chronic fatigue, often associated with low blood pressure, are not necessarily caused by the blood pressure level.

The blood pressure may also fall suddenly from normal levels to 80 or even lower. This occurs in shock associated with injury, operations, anesthesia, or acute infections.

Blood pressure, like any other expression of activity of the body, is not a fixed thing, but varies a good deal in the same individual at different times. Considered alone, it is not an index of health or illness.

Aging & Endocreme

Letting nature take its course is a safer bet

The aging process is a difficult one for a human being to accept. Women, particularly, are anxious to retard the effects of aging, since they are made to feel that their value in society is determined by their attractiveness. And, because the appearance of the skin is an important ingredient thereof, millions of dollars are spent annually on cosmetics.

Among the more expensive of these is *Endocreme*, a salve containing an estrogen hormone, or female sex hormone. This hormone is produced in cycles by the ovaries from the time when menstruation begins, until the menopause or climacteric. After that, the ovaries can no longer make estrogen. *Endocreme* advertising is designed to appeal particularly to women who are over forty. It implies that by application of a cream containing estrogen hormone, the skin will recover its youthful appearance. "Activol," the *Endocreme* ingredient which is supposed to possess the special beautifying properties, is simply a trade name for the estrogen or estrogen-like material.

The *Endocreme* ads claim that "Activol" is "an effective replacement for woman's own natural, skin-beautifying substance." But scientific studies do not give any indication that the sex hormone is solely responsible for the beauty of a woman's skin. Many factors are responsible — some of them unknown. It is true that rubbing in a cream containing an estrogen may make perceptible changes in the appearance and possibly in the texture of the skin. But the effects are temporary and can hardly be said to recapture "youthful radiance." And precisely because the effects are temporary, use is likely to be prolonged.

Much more important than the cost of these hormone cosmetic creams, and the probable futility of using them, is the question whether a danger is involved in repeated applications of any preparation containing estrogens. On this point Dr. Milton M. Hartman, summarizing the place of hormones in skin disorders, has this to say: "Although the small dosage usually used in topical [skin] applications has never been shown to produce tumors and must therefore at present be considered 'safe,' protracted estrogen stimulation by any route plays a part in the growth of uterine fibroids, endometriomata [disease of the womb] and cervical neoplasms [tumors of the cervix of the womb]. The incidence of carcinoma [cancer] of the breast also is believed to be increased by prolonged estrogen stimulation." ("The Use of Hormones in Dermatology," Milton M. Hartman, M.D., *The Journal of Investigative Dermatology*, v. 8, p. 5, May 1947.)

rise and fall of fleischmann's yeast

The advertising industry, so exuberant in the creation of claims for the wares it is hired to promote, professes a curious diffidence about its own powers. It will assure consumers in frequent institutional advertisements that advertised brands exist in a fishbowl, bathed constantly by the white glare of public inspection, and will wither and die at once if the public finds they don't measure up. This is to say that the public will not long be misled by advertising, even should the advertising be misleading. The argument is a nice tribute to the public's discrimination.

But the fact is that a good, heavy advertising campaign can assail, cajole, beguile and prod the consumer from so many angles, in so many forms, and so ceaselessly, that enough consumers to pay the way at least for a long time will almost always respond to it. If it is put together by experts at the business, it will deal in claims and in shadings of claims which are hard to nail down, being less than precise. And it will methodically work on the fears and the frustrations, the private shames and the wistful hopes of the men, women, or children who can be considered the profitable market. Under the daily stimulus of such advertising, it is the consumer's discrimination, and sometimes almost the consumer, who withers and dies. There are, fortunately, commercial areas in which such advertising is frowned on; others in which at least some restraint is practiced; and still others in which the product is a little too prosaic (hair pins? kitchen towels?) to accommodate it. That still leaves more than enough, particularly among those products which are advertised as good-for-what-ails-you.

One of the very worst offenders along these lines has been *Fleischmann's Yeast*. Its manufacturer, Standard Brands, has been the subject of more than one detailed complaint by the Federal Trade Commission. Henceforth, we are happy to report, the public prints will be free of its patent medicine fables. After writing one of the most notorious chapters in advertising, the little yeast cake has abandoned its efforts to cure America's ills. In its heyday, *Fleischmann's Yeast* won many converts. It has been estimated that, at the height of its drive, more than 70% of the adults and adolescents in the United States had eaten the bad-tasting cakes, presumably for adolescent acne, sagging stomach, jumpy nerves, skinniness, or some one of the other similar conditions for which they were advertised.

It all began after World War I, when housewives in increasingly large numbers stopped baking bread at home and began patronizing the commercial bakers. The firm of Gaff, Fleischmann and Company had been founded in 1868 by Charles Fleischmann, who came to Ohio from Austria-Hungary with his fortune in a test tube full of growing yeast culture. As the company grew, it gathered unto itself more than 75% of the entire baker's yeast business in the United States, and had a virtual monopoly on yeast cakes sold through grocery stores. The yellow-labeled, tin-foiled package had become a kitchen fixture and *Fleischmann's Yeast* a household word. But as the home market shrank at a startling rate, foil yeast was in a precarious position.

So the "Yeast-for-Health" campaign was devised. It was an expensive program of high-pressure selling on which the little yeast cake was embarked. The campaign got its big push with the formation of Standard Brands, Inc., in the lush pre-crash days of 1929, when the Fleischmann Company absorbed the Royal Baking Powder Company, Chase & Sanborn, and two smaller enterprises. During the first eight years of the 1930's, the new corporation spent more than $50,000,000 through its advertising agency, the J. Walter Thompson Company, promoting its products, which ranged from vinegar, gin, baking powder and tea to frozen eggs and the all-important yeast. In 1936 its business grossed $115,000,000, and Standard Brands had become the second largest distributor of food and food products in the country. (General Foods was seven and one-half million dollars ahead.)

Culver Photo

Thanks to Rudy Vallee, $10 million worth of yeast

Since 1927, the makers of *Fleischmann's Yeast* have poured millions of dollars into promoting raw yeast as a tonic. Imported testimonials from European physicians, accent on the Viennese, explained that the properties of yeast, *Fleischmann's* in particular, would take care of a variety of conditions from sluggish

You'll like yeast this new way
YOU'RE BREAKING RECORDS. BEEN EATING YEAST AGAIN?
NO... DRINKING FLEISCHMANN'S YEAST IN TOMATO JUICE... A DELICIOUS VITAMIN COCKTAIL

The statement was, you'll like yeast; the implication, restored vigor; the competition, vitamins

YEAST? YOU DON'T MEAN THE REGULAR GROCERY STORE YEAST... FLEISCHMANN'S?
SURE! IT'S CHEAP, TOO. NEVER MORE THAN A FEW CENTS A CAKE. IT'S ONE OF THE RICHEST NATURAL SOURCES OF THE AMAZING VITAMIN B COMPLEX, AND YOU CAN'T LOOK OR FEEL YOUR BEST WITHOUT ENOUGH OF THESE VITAMINS

According to the ads, eating Fleischmann's yeast was the road to health . . . until the FTC spoke up

intestines to headaches. Later there was a "pimples" campaign for teenagers, an "energy" campaign for the middle-aged. In comic strip style appeared graphic accounts of how scrawny wallflowers became curvaceous belles after eating *Fleischmann's Yeast.*

The most potent salesman for the yeast's miraculous properties was Rudy Vallee, who for seven years crooned radio listeners into a receptive mood for the high-pressure message. For his crusade, Vallee was paid as much as $166,000 in a year, $11,000 more than was made by Standard Brands' board chairman. But in 1937, for example, such an expenditure was not bad economy for the company; Rudy's efforts helped ring up $10,000,000 in sales; his salary came to only 1.6% of that.

But crooning and scare copy were not enough. By 1940, the cost of selling and distributing the cakes was eating up a large share of the gross, and the entrance of vitamins in easy-to-take pill form presented a powerful competitor. So Standard Brands left J. Walter Thompson and switched the account to another agency, Kenyon and Eckhardt. The new agency's first campaign aimed at palatability and recipes for drinking the yeast mashed in milk, tomato juice or water. The keynote was "Now you'll *like* yeast." Cowboys, college boys and pretty girls posed as enthusiastic yeast eaters.

A companion campaign was built around the theme of "Grade B Health," accused of being the "great enemy of a woman's looks," "fatal to a girl's popularity," and "a frequent cause of unhappiness in the home." Sluggish digestion, incomplete elimination and jumpy nerves, elements in Grade B Health, could, according to these advertisements, all be fixed by *Fleischmann's Yeast.*

Another campaign went in for implication instead of direct statement. "Been eating yeast again?" became the theme for the new series, based on a sequence of boy-and-girl pictures showing restored strength, beauty and vigor. Keynotes included the following: "All vim-and-vigger! Been eating yeast again?," "You're going good tonight — been eating yeast again?," "You're breaking records — been eating yeast again?"

Along in 1943, the Federal Trade Commission took issue with the therapeutic claims for the product in the treatment of such specific conditions as persistent colds, nervousness, irritability, poor digestion, the symptoms of tiring easily and aging prematurely. All these could be prevented or corrected, claimed the yeast ads, by the daily use of *Fleischmann's Compressed Yeast,* which would cause digestive juices to flow normally. Eating yeast, even the celebrated *Fleischmann's* brand, was no effective treatment for these conditions, stated the Federal Trade Commission flatly. Besides, the FTC complaint stated, not only would the yeast not adequately supplement the daily diet to insure the optimum amount of vitamins, but, contrary to the advertising's statements, the vitamins were readily available in foods.

Continued on page 370

Bread & Butter

The price picture: a morality play in nine parts presented by CU for the benefit of the harassed consumer

1. Prologue

Following the coal and steel price hikes, the *Journal of Commerce* ran the following: "United States Steel Chairman Olds said that the steel price boost would mean about $10 per auto and 50¢ for each refrigerator. That is not much in itself. But . . . let's be realistic about this: Many companies probably have waited for some time for an opportune moment to raise their prices. All they needed was the dramatization of the rising cost trend in the form of the steel boost."

2. Autos

Consumers are beginning to feel the impact of the latest inflationary whirl, set off by the increases in coal and steel prices. General Motors raised the prices of passenger cars in its *Chevrolet*, *Pontiac*, *Oldsmobile*, *Buick*, and *Cadillac* divisions by 2% to 6%. Factory list prices of *Chevrolet* models were increased about $60 on the average; *Buick* models went up $60 to $130. Other auto producers, including *Chrysler*, *Ford*, and *Kaiser-Frazer*, also raised their prices.

General Motors joined the inflationary parade even though its profits after taxes in the first six months of this year were 147.6 million dollars, the highest in a decade except at the wartime peak. In a conspicuous example of understatement, the company admitted that its first half profits had been "reasonably satisfactory."

General Motors, like the rest of the auto industry, would seem to be more interested in cashing in on the prevailing sellers' market than in helping to curb inflation. Auto prices today are about 50% above the prewar level, and the industry freely admits that consumers who formerly purchased cars in the lower price ranges have been priced out of the market.

3. Meat

Although meat supplies will be very large during the rest of the year, prices will decline only moderately, if at all, according to the Bureau of Agricultural Economics. Meat prices are now at peak levels and have advanced more during the past year than the prices of other major foods.

Meat production this fall will be about as great as last year when it was considerably above average. But the large packers, who are making record-breaking profits, apparently do not believe that bigger supplies should bring lower prices. The result is that the Bureau of Agricultural Economics expects prices to drop substantially only if a depression sets in and causes a sharp fall in consumer incomes and expenditures.

4. Shoes

Consumers will find that shoe prices are higher than ever this fall. Price increases ranging from 50¢ to a dollar a pair have been put into effect for leading lower, medium and higher price shoe brands. Higher priced men's shoes have had the largest increases.

Prices have been raised by the industry in the face of consumer resistance which caused unit sales to fall 20% during the first half of the year. Production of shoes this year is estimated at 420 million pairs, compared with 525 millions last year.

Shoe prices were too high even before the latest increases. The industry, by ignoring growing consumer resistance, is simply pricing more would-be buyers out of the market.

5. Incomes and savings

That the majority of American families do not have incomes large enough to maintain their living standards at a level of health and decency is revealed by a survey of consumer incomes and savings recently completed by the Federal Reserve Board. The survey found that, in 1946:

Ninety percent of American families made less than $4850.

Seventy percent of all families made less than $3100.

Some 40% of all families made less than $2000.

The top 10% of families received 32% of the total consumer income, while the bottom 40% of families received only 15%

Now, in 1946, according to the authoritative studies of the Heller Committee of the University of California, it took about $3600 to provide a family of four, including two children, with a decent and healthful living standard. The figures of the Federal Reserve Board survey

thus reveal that in the midst of the 1946 boom, 70% of American families were receiving substandard incomes — an ironic situation, to say the least.

With living costs going up around 20% in the past year, a great many of these low-income families have been going into debt or buying on credit to make ends meet. They have been, for the most part, priced out of the market for new housing and such consumer durable goods as automobiles, refrigerators and washing machines.

The prospect, in the light of the steady parade of price increases, is a disturbing one. A further rise in living costs, when half of the people have enough income to provide only for bare necessities, is an invitation to depression.

6. Comic relief

With food prices at an all-time high, with clothing and other prices increasing, with rents being pushed up under the ineffective rent control law, the joint Congressional economic committee is launching a country-wide investigation into out-of-line prices. The Committee will spend $100,000 in its probe of the present high cost of living.

There is considerable irony about this investigation. It will be headed by men who were primarily responsible for destroying price control last year and letting inflation loose on the country. This year they wiped out effective rent control, increasing the inflationary pressures on millions of families. Now they are apparently going to investigate the results of their wrecking job and take stock of the damage.

Nothing concrete can be expected from the Committee's investigation. The individuals who were largely to blame for the 20% run-up which occurred in living costs during the past 15 months, are not likely to bring in a report that they were guilty of harming the interests of consumers and the welfare of the country. In fact, they will probably do exactly nothing. Senator Robert A. Taft, head of the Committee, has already announced that it will not make any recommendations on economic matters this year.

7. Price conspiracies?

The Administration's campaign of "moral suasion" to lower prices has collapsed. Recognition of this failure was reflected in last month's announcement by the Justice Department that it has launched "a program aimed at conspiracies to maintain or increase present prices in the food, clothing and housing fields." The shoe is now on a more vigorous foot.

This belated action, if actually followed through, will be welcomed by consumers whose living costs are again shooting up with no end in sight. Criminal prosecution under the antitrust laws, promised by the Justice Department, may bring some results. Hardly less important is the Department's promise that it will "oppose acceptance by the courts of pleas of *nolo contendere* (no contest)." Upon conviction, the Justice Department will "recommend jail sentences for the individual defendants and maximum fines against the corporations.

If the Justice Department follows through on this program, it will mark an important change in policy. In the past it accepted pleas of *nolo contendere* (which had the effect of minimizing penalties) instead of fighting cases through to the end. The result was that corporate malefactors violated the antitrust laws with relative impunity; jail sentences for corporate executives were virtually never imposed.

Said the Justice Department last month: "The relative ineffectiveness of past enforcement, together with the soaring high prices now continuing in the food, clothing and housing fields . . . require a new and more vigorous approach."

In the days following the Department's announcement, newspapers broke out with a rash of statements from companies and trade associations, all to the effect that the Justice Department couldn't have *them* in mind. Still, retail food prices are more than 100% above their prewar level. Clothing prices have almost doubled. Housing prices are more than twice as high as before the war. Low production is not the reason living costs are so far out of line; national output, to the contrary, is at an all-time peak. So are profits (*see below*). It is indeed time for the Government to investigate and prosecute.

But subsequent developments cast considerable doubt on the Administration's actual intention to apply "a new and more vigorous approach." The Federal Trade Commission charged "all the important iron and steel producers" with entering into a "wrongful and unlawful" combination and conspiracy to fix prices and destroy competition. According to the FTC, the iron and steel industry allegedly uses a monopolistic pricing system which results in delivered prices of steel products being the same "as though all the mills were under one ownership and control."

If the FTC issues a cease-and-desist order, which would be enforceable only after lengthy litigation, the eventual penalty would be a $5000 fine. Even this slap on the wrist might never be carried through; a similar case by the FTC against the leading iron and steel producers in 1924 is still unfinished. Obviously, the Administration did not use "a new and more vigorous approach" towards the problem of excessively high steel prices.

In two other instances, the Justice Department filed antitrust suits against leading tire companies and the color motion picture industry for alleged conspiracies to fix prices. Both cases are for past actions and do not touch on the suspected price conspiracies that brought

on the sharp inflation which followed the destruction of price control.

8. The villain in the piece

Corporate profits, benefiting from inflationary prices, have attained fantastically high levels. The *Wall Street Journal* reported that "profits of U. S. industry in the June quarter . . . showed a whopping 84% increase over the year-ago level. First half profits were the highest ever." Similarly, the National City Bank of New York stated that industrial profits in the first half of 1947 were approximately double those of the first half of 1946.

The Commerce Department estimates that corporate profits *before taxes* were running at an annual rate of 29 billion dollars during the first six months of 1947 as against 21 billions in 1946 and the wartime peak of 24.5 billions in 1943.

Corporate profits *after taxes* in the first half of the year were 17.4 billion dollars on an annual basis. They were 12.5 billions in 1946 and 10.4 billions in the best war year, 1943. In the boom year, 1929, corporate profits after taxes were 8.4 billions — less than half their present level.

Consumers will be interested in the rate of return shown by some of the industries supplying them with goods and services. The food products industry had a return on net worth of 20.8%; the textile and apparel industry, 19%; the cement, glass and stone industry, 18.1%; the electrical equipment industry, 17.8%; the auto industry, 20.5%; the wholesale and retail trades, 16%. Most of these figures are more than double what they were a year and two years ago.

9. Epilogue

A revealing disclosure of monopoly operations occurred recently when the British diamond monopoly pulled into its fold the only remaining "independent" of any substantial size. This "independent" producer agreed to sell only through the monopoly, which exercises world control over the output and sale of the entire supply of diamonds.

The agreement between the "independent" and the monopoly, according to the *Wall Street Journal*, "aims at averting the sale of diamonds at fantastically high prices at one moment, followed by dumping at equally low prices."

Another objective was given out by the *Wall Street Journal* later in its story, when it observed that the agreement will strengthen the diamond monopoly's "policy of trying to keep the diamond supply a bit less than demand."

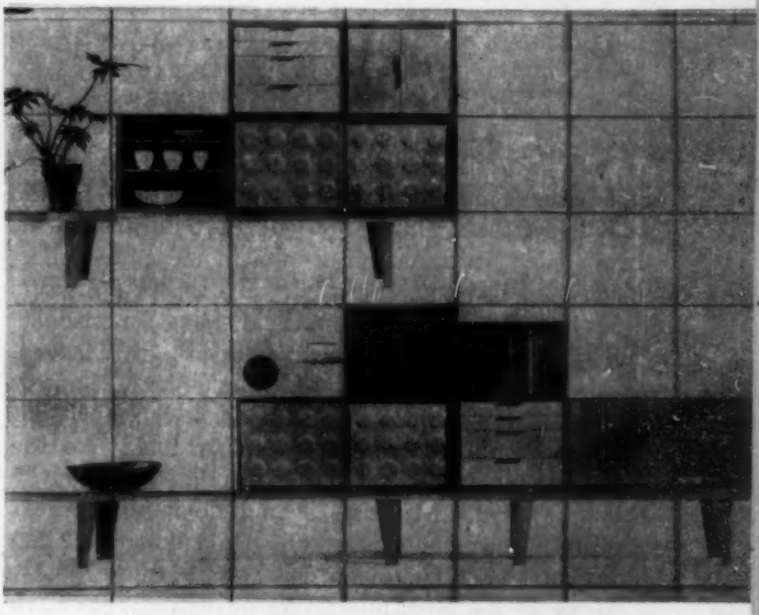
That is the ultimate objective of all monopolies. By keeping "supply a bit less than demand," the monopolies can hold prices high for any commodity, from diamonds on up or down.

The shape of things

by Eliot F. Noyes

MODERN FURNITURE

Mass production will lower prices, and some steps to achieve it are at last being taken



Unit pieces, such as those shown against blocked-off background above, make for flexibility

Good furniture from other periods is still good furniture, but it was made by hand to fit the needs and customs of other days. Our lives are so entirely different from the lives of men in the 18th Century or any other period that our needs in furniture must inevitably be different from theirs in many ways. Creative designers are concerned with solving today's problems with today's means, and they argue with considerable justification that they should not be expected to use present-day techniques just to copy old pieces.

For the consumer, it is more practical and more rewarding to search for the best that today offers than to revert to period reproductions. Nor is this just a form of snobbery. Period reproductions almost always sacrifice important elements of usefulness, efficiency or comfort in the effort to recapture old shapes and details. If, on the other hand, you have inherited some good old furni-

ture that is still useful, as much of it is, there is certainly no point in putting it in the attic; just don't feel that in buying new pieces you are limited to the same period.

Good pieces from different periods often go very well together if they are really good; their compatibility is more a matter of scale, size, spirit and quality than of style. A Windsor chair can be perfectly at home with a modern one by Aalto or Eames. Similarly, there is no need to worry about the propriety of using old furniture in a modern house, or modern in an old house.

There is more good modern furniture available in this country now than there ever has been before. Ten years ago, anyone searching for really good contemporary design was limited pretty much to the excellent pieces imported from Scandinavia. Now good modern furniture is designed and produced in this country, and more is turning up every day. Much is produced under the banner of "modern design" which is thoroughly bad, however.

It is important to analyze what is available in terms of your needs, in exactly the same way that you would in buying an automobile or a lawnmower. First, be sure that it performs well the job you have in mind for it. In a chair, this means chiefly that it must be comfortable. In a bedroom chest, it means that the drawers must be of an efficient size to hold shirts, for example, and that the drawer handles are easy to grip. Second, check to see that it is well-built, whether by machine or hand, but reject the machine-made piece which imitates handicraft detail. It invariably looks like the fraud it is. Third, examine the materials and the way they are used. Materials should obviously express their own good qualities; wood should be treated like wood and should look like wood.

Many of the most interesting modern designs have evolved from the invention of new structural systems and the imaginative use of new materials such as plywood, foam rubber, plastics, metals, etc. Of outstanding interest along these lines are the chairs and case pieces designed by Charles Eames, and produced by the Evans Products Company, Detroit. Though most furniture produced today is still heavily dependent on hand processes, the Eames group is really designed and engineered for mass production, while in appearance the pieces are a clean and beautiful expression of new materials and techniques in the hands of a sensitive designer. Department stores will have them readily available in October.

The Eames pieces express most clearly the aim of the best modern designers, to provide extremely comfortable chairs which are at the same time light in weight, economical in construction and materials, and suited to mass production. The Finnish designer, Alvar Aalto, was a pioneer in developing furniture in this spirit; many Aalto pieces are now being imported from Finland and may be bought through Finsven, 925 Madison Avenue, New York. Other excellent imported furniture is carried by Knoll Associates, 601 Madison Avenue, New York, whose main line, however, comprises a well-known and complete set of very good designs made in this country and available in many stores. Also worth noting is a special group of distinctive character made by Van-Keppel-Green, Beverly Hills, California.

Upholstered chair by George Nelson and plywood chair by Charles Eames show variety of modern designs today

Ezra Stoller

While much modern furniture aims at light, articulated construction as in the Eames and Aalto pieces, there is a kind of soft luxurious seating comfort which can be found only in heavy upholstered chairs and sofas. The springs and padding through which this comfort is attained usually make them large and bulky, too. If such pieces are not too space-consuming, they are a useful and important part of the furnishings. In buying them, look for simple shapes and maximum comfort in a variety of sitting positions. The chair illustrated is a member of a large and interesting group designed by

Pieces designed by Eames and versatile case and bench units like those at far right designed by George Nelson are being mass produced in this country at long last

Good modern and good old pieces go well together. Here old table and chairs are at home in their modern surroundings

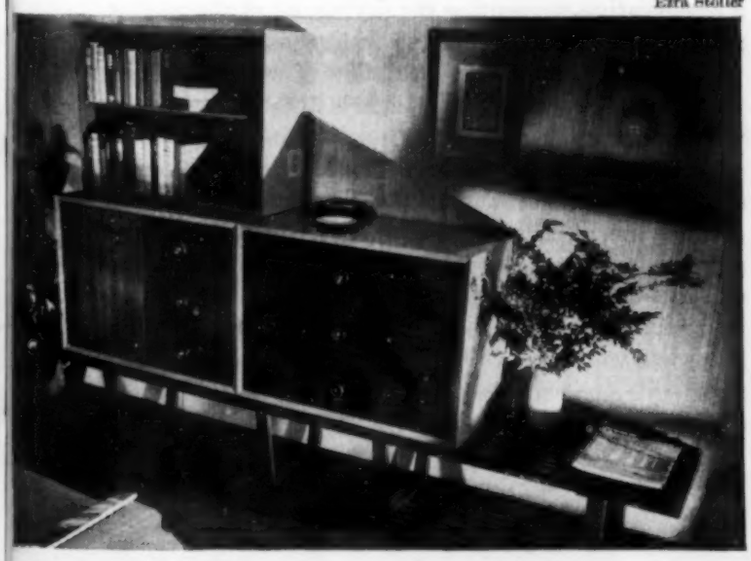
P. A. Dearborn

George Nelson for the Herman Miller Furniture Company, Zeeland, Michigan. Other recommended groups include those designed by Edward Wormley for the Dunbar Furniture Manufacturing Company, of Berne, Indiana, and for the Drexel Furniture Company, of Drexel, North Carolina.

Modern design has given us an increased range of usefulness in the development of unit furniture, where a number of different types of cases (with or without shelves, drawers, cabinets, etc.) have matching dimensions so that they may be combined vertically and horizontally in a great variety of different arrangements.

A comparatively recent addition to the unit furniture idea are bench units on which cases may be placed, bringing them off the floor. The benches are useful by themselves, too, and increase the flexibility of the system. Examples from the Eames and Nelson groups are shown in the illustrations. One of the most extensive unit lines is that designed by Morris Sanders for the Mengel Company.

Ezra Stoller



Modern furniture designers generally try to gear their designs to mass-production techniques, hoping that efficient large-scale manufacture will result in an inexpensive product. Two elements are usually missing from this picture, with the unfortunate result that modern furniture is often too expensive for average buyers. First, furniture plants are in large part not equipped with really up-to-date machinery and technical facilities, but continue to use pretty much the same machines, and even the hand techniques, which have been in use for a long time. Second, modern pieces usually have not been produced in sufficient volume — despite the designers' hopes — to bring the unit price down. The furniture industry, like the housing industry in its extreme decentralization and reliance on old methods, has a tendency to continue producing what it traditionally has produced, and by the same methods.

The effect of these things has kept prices high. Still, as modern furniture grows in acceptance and manufacturing techniques are brought up-to-date, the price picture should improve considerably, and some steps along these lines have already been taken. Now, for the first time in this country, a true mass-production approach is being applied in the Eames designs. These pieces are relatively inexpensive now, but the company expects to be able to lower them still further since manufacture on a large scale is just getting under way in a newly equipped plant.

The flat roof can be used with traditional architectural styles

The case for the flat roof

A flat roof costs less than a pitched one, lends itself to almost any shape and style

Ezra Stoller

This modern, flat-roof house, designed by the authors and built in Croton, N. Y., won the New York State Society of Architects' prize for the best small house, 1936 to 1946

by Simon Breines and Ralph Pomerance, architects

There are two ways for the prospective home builder to approach the question of the flat roof vs. the pitched roof. The first approach, an aesthetic one, leads only to ruffled tempers or to the strengthening of one's original convictions. This article will stick to the more fruitful approach of analyzing the question in terms of comparative function and economy.

To start with, both types of roof will perform their major function, which is to keep out the weather. In northern climates, the flat roof is designed to carry a snow load. Most urban buildings, office buildings, apartment houses, shops, etc., have flat roofs and suffer no ill effects from snow. If the building is properly insulated, snow will accumulate on the roof, providing some additional insulation in itself.

Leaves will also accumulate on a flat roof. But deciduous leaves will generally blow off, while coniferous leaves will collect around the drain and require occasional removal — a simple task compared to cleaning out the gutters on a pitched roof house.

In order to compare the costs of the two types of roof, estimates have been prepared for a unit 20x36 feet. For the summing up, see the opposite page. The pitched roof provides for a simple gable-end design similar to that of a "Cape Cod cottage." Any deviation from a simple rectangle would result in a proportionately greater increase in cost than would be the case for a flat roof; framing would become more complicated, and metal flashing work would increase.

The flat roof, therefore, offers one great advantage in planning: it is possible to roof any shape easily. A pitched roof must always be considered in basic planning, since only certain shapes can be framed properly for roofing. Overhangs to shade windows in the summer, easily provided with a pitched roof design, are just as easily provided with a flat roof. In addition, the "water film roof" can be utilized with the flat roof. For this, the drain of the roof is designed in such a way as to allow a shallow pool of water to remain on the surface, where the water can act as a reflector.

In addition to keeping out the heat, the water acts as a preservative, preventing the drying out of the roofing materials. A roof so protected will generally last for a very long time. Because a small flow of water is needed to make up for evaporation, there is little chance of the water's becoming stagnant. And, because the roof is open and usually breeze swept, the danger of providing a breeding ground for mosquitoes is remote.

There are, of course, considerations which may make a pitched roof seem desirable. And in some real estate developments, restrictions against the use of a flat roof may make the pitched roof a necessity. Again, there may be people who want to build according to an architectural style that requires a pitched roof. For more on this, see the following page.

How do costs compare?

The prices given in the following tabulation are those currently prevailing in the Westchester County area, New York.

THE PITCHED ROOF

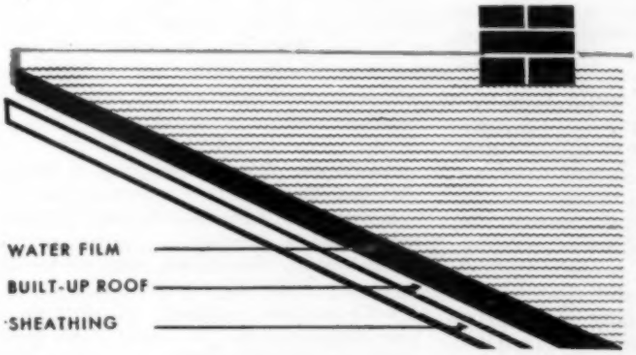
Item	Quantity	Unit cost	Total cost
Framing lumber and sheathing	3000 bd. ft.	$170.00 per M	$ 510.00
Nails	2 kegs	10.00	20.00
Copper flashing	1 unit	35.00	35.00
Copper gutters and leaders	100 lin. ft.	1.00 lin. ft.	100.00
1″ x 6″ siding at gable ends	250 sq. ft.	.35 sq. ft.	87.50
Louvres	2	10.00	20.00
Asbestos shingles	15 squares	16.00 sq.	240.00
		Total	$1012.50

THE FLAT ROOF

Framing lumber and sheathing	1800 sq. ft.	170.00 per M	$ 306.00
Nails	2 kegs	10.00	20.00
Copper coping	112 lin. ft.	1.00 lin. ft.	112.00
Inside drain and leader		75.00	75.00
15-yr. bonded slag roof	720 sq. ft.	.25 sq. ft.	180.00
		Total	$ 693.00

The attic and storage

Many people seem to feel that the attic space under a pitched roof provides an ideal place for storage and for extra play area. Their reasoning resembles that of the people who feel the same way about the cellar (*Reports*, August). The attic, like the cellar, does often appear to be the only practical way to solve a storage problem. But, also like the cellar, the attic is usually dark, involves a hazardous stair, and ends up by accumulating a lot of inaccessible junk. If a safe stair is provided, additional room will have to be found for it, and it will be necessary to install a floor. Getting light and air means building in windows. And unless the house is a relatively large one, the head room in the attic will be too low to make a decent play space. All of this increases construction costs well beyond the point indicated in the figures given here for a pitched roof. The place to have such storage space and extra room is at ground level, where it can be well-lighted, ventilated, and accessible. Storage space planned in this way is bound to be more satisfactory than an attic.



The water film roof

Constructing a flat roof to hold a water film is a comparatively simple affair (see text, opposite page). The pool on a roof such as that shown reflects solar radiation and so keeps the house cooler. The amount of radiation reflected depends on the depth of the water; diagram below indicates the amount of heat reflected by different depths.

Architectural styles

Obviously, there are some places where the flat roof cannot be used. Besides the covenants in some localities that may require the use of a pitched roof, some people prefer an historic style, complete with the traditional roof, for aesthetic reasons. Right now the prevalent taste seems to run to pitched roof, American Colonial.

Of course the flat roof can be utilized in any contemporary architectural style. But the flat roof as such is not necessarily modern, although the two have come to be associated. As a matter of fact, many historic styles employ flat roofs, and most urban houses use them. Moreover, some of the more formal historic styles lend themselves well, in modern interpretations, to the use of the flat roof, and it can also be incorporated satisfactorily into what goes by the name of Colonial.

In conclusion, it may be said that where low cost is the most important consideration, the flat roof offers a real economy, as the table of costs above shows. Whether or not the importance of the economy is outweighed by preference for a pitched roof or a style that may go better with a pitched roof, is, of course, up to the home builder. When it comes to matters of style, the architect can only point out pros and cons.

New records

CU's record consultant passes critical judgment on some of the new album releases of both major and independent companies

BACH: Suites — No. 2 in B Minor & No. 3 in D Major. Boston Symphony Orchestra under Serge Koussevitzky. *Victor* Album M-1123 (five 12-inch records), $5.85. ¶ The intimate Second Suite for flutes and strings and the festive and popular Third (containing the celebrated *Air*) are given ultra-refined performances by a small body of Boston Symphony players. The recording is excellent.

BACH: The Well-Tempered Clavier — Preludes and Fugues No. 1 to 5. Dorothy Lane (harpsichord). *Concord* Album D-6 (three 12-inch vinylite records), $7. ¶ Hearing Bach's "Well-Tempered Clavier" on the harpsichord provides a novel, and we feel, very exciting experience. Miss Lane's performances are vital, the recording good, and the vinylite playing surfaces superb.

BERG: Wozzeck — Three Fragments. Charlotte Boerner (soprano) with the Janssen Symphony Orchestra of Los Angeles under Werner Janssen. *Artist Records* Album JS-12 (two 12-inch records), $3. ¶ This opera by Schönberg's most gifted disciple, Alban Berg, deals with a bullied soldier who murders his sweetheart, then drowns himself by accident. From this sordid drama the composer has woven a modern masterwork of deeply tragic implication; but in America, at least, it has been more discussed than performed. Now an ambitious West Coast recording firm has given us three vivid fragments from the score arranged for concert performance by the composer himself. The performance is excellent, the recording thoroughly good.

DEBUSSY: Sonata No. 3 for Violin and Piano & **RAVEL:** Berceuse on the Name of Fauré. Zino Francescatti and Robert Casadesus. *Columbia* Album X-280 (two 12-inch records), $3. ¶ Debussy's last musical will and testament, together with Ravel's brief and very lovely Berceuse, receive performances of rare refinement at the hands of Messrs. Francescatti and Casadesus. The recording is first-rate.

FRANCK: Psyche — Symphonic Suite; & The Mad Huntsman. Chicago Symphony Orchestra under Désiré Defauw. *Victor* Album M-1122 (four 12-inch records), $4.85. ¶ The sensuously Wagnerian "Psyche" music and the Weberishly romantic tone-saga of "The Mad Huntsman" get brilliant readings from Defauw and his Chicago players. Exceptionally brilliant and powerful recording.

HANDEL: Concerti Grossi, Op. 6 (No. 1 in G Major; No. 2 in F Major; No. 3 in E Minor; No. 4 in A Minor; No. 5 in D Major; No. 6 in G Minor; No. 7 in B-flat Major; No. 8 in E Minor; No. 9 in F Major; No. 10 in D Minor; No. 11 in A Major; No. 12 in B Minor). Busch Chamber Players under Adolph Busch. *Columbia* Album M-685 (twenty-five 12-inch records in three volumes), $28.50. ¶ The glorious music of Handel fares excellently in this ambitious recording project. The performances are carried out in the authentic 18th century manner, complete to the use of harpsichord for the figured bass. Mr. Busch's readings are full-blooded, and the recording of his ensemble has been accomplished in admirable fashion. It is our understanding that for the moment at least, these records can be purchased only in the complete three-album unit.

KAUDER: Sonata for English Horn and Piano. Louis Speyer and Erwin Bodky. *Night Music* Album NM-105 (two 10-inch vinylite records), $2.50. ¶ This sonata by Czech-born Hugo Kauder, now living in America, is a fascinating little work, based on a highly individual treatment of the diatonic scale. The results, which have a strong tinge of Gregorian Chant, we found most enjoyable. The reproduction is good, the playing surfaces quiet.

LISZT: Mephisto Waltz (Episode in the Village Inn after Lenau's "Faust") & **WOLF-FERRARI:** The Secret of Suzanne — Overture. N. Y. Philharmonic-Symphony Orchestra under Artur Rodzinski. *Columbia* Album X-281 (two 12-inch records), $3. ¶ Liszt's Faust episode, alternately sardonic and lush in idiom, gets a powerful and brilliantly recorded performance here, and the Wolf-Ferrari Overture fares even better. As between this version of the Liszt and that by the Boston Symphony on *Victor*, it's a matter of listen and make your own choice.

PROKOFIEFF: Romeo and Juliet — Ballet Suite No. 2, Op. 64b (No. 1, Montagues and Capulets; No. 2, Juliet the Maiden; No. 4, Dance; No. 7, Romeo at Juliet's Grave). Boston Symphony Orchestra under Serge Koussevitzky. *Victor* Album M-1129 (two 12-inch records), $2.85. ¶ These four movements from Prokofieff's elaborate ballet range in spirit from the ruthless, sardonic opening piece and the piercingly poignant finale to the simple, light-hearted music of the middle numbers. The Boston Symphony playing is magnificent, the recording impressive in sonority and richness.

SCHUMANN: Humoreske in B-flat, Op. 20. Paul Loyonnet (piano). *Concert Hall Society* Album A-1 (three 12-inch vinylite records), $7. ¶ One of the least-known but most important of Schumann's large-scale piano works receives a fine performance by Loyonnet. The reproduction is outstanding, and the vinylite playing surfaces virtually noiseless on our phonograph.

STRAUSS: Le Bourgeois Gentilhomme — Incidental Music to Molière's Comedy, Op. 60. Pittsburgh Symphony Orchestra under Fritz Reiner. *Columbia* Album M-693 (five 12-inch records), $6. ¶ The Richard Strauss score for Molière's witty stage piece is a trifle overloaded for its own good, but when given a virtuoso performance, makes for diverting listening. In Reiner's baton there is an abundance of virtuosity, but the orchestra is not always in the same class. The recording is reasonably good.

VERDI: La Traviata (complete recording). Adriana Guerrini (soprano), Maria Huder (mezzo-soprano), Luigi Infantino (tenor), Paolo Silveri (baritone) and others with Chorus and Orchestra of the Rome Opera under Vincenzo Bellezza. *Columbia* Album Op. 25 (fifteen 12-inch records in two volumes), $18. ¶ This badly needed new recording of Verdi's operatic favorite offers a well-routined but not exceptional performance. Vocalism ranges from fair to good; over-all production is excellent, and recorded sound thoroughly acceptable.

VILLA-LOBOS: Quartet No. 6 in E Major ("In Brazilian Style"). Stuyvesant Quartet. *International* Album M-301 (three 12-inch records), $4. ¶ Another independent record company enters the serious music field; and its choice of this colorful string quartet, by Brazil's foremost composer, proves to be a most auspicious one. Not only is this good string quartet writing, based on the artful use of popular and folk music motifs, but most enjoyable and stimulating listening as well. The recording is exceptionally brilliant and alive, and the performance first-rate.

WAGNER: Die Meistersinger — "Trial Song" & "Prize Song"; Lohengrin — "In fernem Land" & "Farewell to the Swan"; Tannhäuser — "Rome Narrative"; Parsifal — "Nur eine Waffe taugt." Torsten Ralf (tenor) with the Metropolitan Opera Orchestra under Fritz Busch. *Columbia* Album M-634 (four 12-inch records), $5. ¶ In terms of vocal timbre Ralf is better suited to these Wagnerian roles than Melchior, who has also recorded them. But for all his conscientious musicianship, Ralf's delivery tends toward the anemic and bleaty. The orchestral accompaniments are competently handled, and the recording is generally good.

Letters from CU readers

CONT'D FROM PAGE 327

"Raising the Car" is of particular interest to us. May we reprint this section of the article in the *Airways Radio Journal*? . . .

¶It is Consumers Union's policy not to allow any of its material to be used in any way for advertising, promotion or publicity by the manufacturer or distributor of a product rated in the *Reports*. Under special circumstances, CU does grant permission to noncommercial agencies to use parts of the editorial content, as for example, in textbooks, or in the *Airways Radio Journal* mentioned above.

Dear CU:

With rising prices everywhere, the housewife is finding it increasingly difficult to buy enough food with the money she has to spend.

We believe we can be of tremendous help to working men and women by steering them to the products which give the best quality for the best price.

Our circulation is exclusively among people who are employed — union memberships. As a class, these people make up the largest buying group in the nation. We feel that a real effort must be made to educate families in the matter of buying. . . .

We'd like to feature *Consumer Reports* weekly, biweekly or monthly. We think a feature column is one of the best services we can give to our readers. What we have in mind is Consumers Union information exclusively.

¶CU publishes a syndicated monthly column, YOUR DOLLAR, which is furnished to labor, school, college and church papers for a nominal sum. It contains a digest of four leading articles from the current issue of the *Reports*, and is being reprinted extensively.

Dear CU:

My classes spend at least six months on consumer problems. I would very much like to emphasize your work.

Please send me information as to cost and services of your magazine. I am very anxious to get information to my 180 high school students as soon as possible.

¶CU has a special bundle offer available to teachers in schools and colleges. Teachers who wish detailed information about this offer, which is available throughout the school term, should write to Mrs. Jean Whitehill at the Consumers Union office.

CU's subscribers

CONT'D FROM PAGE 326

and $7500. Seven percent said that it would be between $7500 and $10,000. About 1% replied that they expected an income of more than $25,000 or less than $1000. Four percent answered that they did not know what their income would be.

These figures were not so very different from those tabulated in 1946. Last year, 43% expected an income of between $3000 and $5000; 23% expected it to be below $3000; and 19%, between $5000 and $7500. Five percent said it would be between $7500 and $10,000, and .7% expected it to be either over $25,000 or under $1000.

Political action

It was found that only 39% of the 1947 respondents had written to the President, a Congressman, Senator, or Federal agency during the past year in order to express an opinion on legislation or government action. Last year, 47% indicated that they had done so.

CU's *Bread & Butter* section

The decision to discontinue *Bread & Butter* as a weekly had to be taken during the winter, and was made by the CU Board of Directors on the basis of its best judgment and expressed wishes of a large number of subscribers. Seventy-five percent of the respondents approved of the decision, while 6% disapproved, and 19%, including many new subscribers who had never received *Bread & Butter* separately, said they had no opinion about it.

Hospitalization insurance

A series of questions on hospitalization insurance was asked for the first time this year. It was learned that 71% of those answering now carry hospitalization insurance of some kind for themselves and their families. Fifty-five percent said they were carrying Blue Cross insurance, as opposed to insurance with a private company or some other coverage. Fifty-four percent have had occasion to make use of their insurance at some time; and of those who have used their policies, 66% professed to be well pleased with the way they had been covered.

Food parcels

CONT'D FROM PAGE 339

Soap: hard-milled toilet soap probably is best for space economy. Tough manila envelopes filled with soap flakes can also be used as stuffers.

In many cities, food stores display signs offering to send packages overseas. They may be ready-packed selections or shipments of your own choice. Commercial packages are apt to be more expensive than their home-packed counterparts but do save time, thought, labor and often tedious shopping. This convenience must be paid for, and frequently results are disappointing. Commercial shipments are often characterized by ill-chosen contents, poor packing and ignorance or disregard of regulations. It is probably safest to avoid commercial companies organized solely for food parcel shipping, unless you know something about them. A transaction involving the shipping of food abroad requires a specific and all-inclusive "money back" guarantee, and you should be sure that you understand what is really included in that guarantee when you deal with commercial shippers.

Yeast: its rise and fall

Cont'd from page 359

The "cease and desist" order against Standard Brands received little publicity in the newspapers, as is usually the case with such orders.

That same year, Standard Brands tried a last-ditch move to regain yeast's popularity. Under a new president, James S. Adams, the product was modernized and offered for sale in cellophane-wrapped tablet form. But assurances that the revamped product was easy to take and had a pleasant taste did not attract many customers and the pills were soon withdrawn. At the same time Standard Brands tried to cash in on the booming vitamin market with two heavily advertised brands, *Stams*, a multi-vitamin and mineral product, and *Stan-B*, a vitamin B complex item. The public was not so receptive this time, and the following year Standard Brands abruptly abandoned the vitamin field.

This year Standard Brands tangled with the Federal Trade Commission again. The company had rechristened its old stand-by *Fleischmann's High-Vitamin Yeast*, the "only [yeast in which you can] get such an abundant supply of the four important vitamins A, B, D and G and all the amazing Vitamin B complex." The Commission objected to the implication that the product was a natural yeast superior to other yeast.

Moreover, the second complaint leveled a serious charge: "Yeast cakes produced under a formula in use in 1946 and from 1938 to 1944 not only contribute no thiamin [Vitamin B_1] to the body but result in depriving the body of considerable amounts of the thiamin obtained from other foods; . . . continued eating of the product will result in depletion of the body's thiamin to an extent which may have very serious consequences."

Standard Brands is not fighting the complaint. To the FTC it revealed that it has at last abandoned the "Yeast-for-Health" drive. The reason was not so much pressure from Washington as the drastic drop in yeast sales. Standard Brands told the FTC that *Fleischmann's Yeast* is no longer advertised for "direct human consumption and health purposes," and there is no intention of resuming such advertising. Indeed, the 1947 yeast advertisements are devoted entirely to home baking and are being geared only to the farm market. Photographs and recipes extol such oven delicacies as apple cake "deliciously different" and "flavory orange-filled rolls." Not a word about vitamins. Nothing at all about unhappiness in the home. After 20 years, the show is over.

consumers union
17 UNION SQUARE WEST, NEW YORK, 3

I ENCLOSE $5 FOR WHICH PLEASE

☐ Enter my subscription to Consumers Union publications (including the Buying Guide issue) for one year.

☐ Renew my subscription for one year.

I ENCLOSE $8.50 FOR WHICH PLEASE

☐ Enter my subscription to Consumers Union publications for two years.

☐ Renew my subscription for two years.

I am enclosing $..... for which please send me the following:

☐ Bound volume of the Reports, 1946—$3

☐ Set of three volumes, 1946 plus '42, '43, '44, '45 (circle years wanted)—$5

Name.....

Address.....

.....9CU

Housing industry

Cont'd from page 336

produced by this method — millwork, sheathing board, and core stock for doors and furniture.

The millwork is made by mixing sawdust and resin. Under heat and pressure, the mixture is forced through dies of the desired shapes and sizes to produce window frame stock, base and head trim, and door frames. Because the principal ingredient is waste, and can be bought for the price of hauling it away, the finished product can be produced at a fraction of the cost of standard millwork.

To make doors of the same material, the mixture is placed in a door press, with thin veneers top and bottom and stiles and rails at the edges. A completed flush door of high quality and excellent finish is produced in one press operation, at a very low cost.

The sheathing board is of pressed waste shavings, with asphalt paper adhered to both sides to make it moisture-proof. This sheathing board serves the double purpose of sheathing and insulation, since it has good insulating characteristics. It is very widely used in Detroit building projects today, and an expanded production program is planned for the immediate future for all three materials.

Still another new product is *Castle Square* parquet flooring, now manufactured by Newcastle Industries, LaFollette, Tennessee. It is unique in that each piece of hardwood is separated from every other piece by a very thin strip of synthetic latex paper which serves the dual purpose of binding the wood together and acting as an expansion joint to compensate for the expansion and contraction of the wood under varying weather conditions. A tightly laid floor at all times is thus assured.

Other new products of great promise in the housing field are already in production, or are scheduled to go into production in the near future. The few mentioned here serve to indicate that progress *is* being made in the field of housing materials. It is, however, a process of evolution, and slow evolution at that; it will take time for such new materials to make their full impact on the industry.

CU's movie poll

To help *Reports* readers get "Best Buys" for their movie money, CU presents ratings made up with the aid of some 2000 subscribers, most of them group leaders, and members of CU's National Advisory Committee. Each participant, as soon as he sees a picture, notifies CU by special card whether he considers it to be "Excellent (E)," "Good (G)," "Fair (F)," or "Poor (P)." The tabulation shows the percentage of replies in each category (largest vote is in color). How several movie critics (Cr) felt is also indicated, to the extent that various opinions can be summarized. (*CU neither selects the picture nor makes recommendations, but simply reports the results of its poll.*)

Picture and principal stars	Percentages E	G	F	P	Cr
BEST YEARS OF OUR LIVES Fredric March, Myrna Loy	83	16	1	0	G
BLAZE OF NOON Anne Baxter, Sonny Tufts	21	47	32	0	FG
BOOMERANG! Dana Andrews, Jane Wyatt	75	22	3	0	E
BRASHER DOUBLOON George Montgomery, Nancy Guild	5	30	35	30	F
CALCUTTA Alan Ladd, Gail Russell	5	38	41	16	F
CALIFORNIA Barbara Stanwyck, Ray Milland	7	60	29	4	G
CHEYENNE Dennis Morgan, Jane Wyman	0	55	39	6	FG
DEVIL THUMBS A RIDE Lawrence Tierney, Nan Leslie	0	20	50	30	F
DUEL IN THE SUN Gregory Peck, Jennifer Jones	25	39	28	8	FG
DEAR RUTH William Holden, Joan Caulfield	47	42	11	0	GE
EGG AND I Fred MacMurray, Claudette Colbert	23	57	15	5	FG
FABULOUS DORSEYS Tommy & Jimmy Dorsey, Janet Blair	0	25	29	46	F
FARMER'S DAUGHTER Loretta Young, Joseph Cotten	45	51	3	1	G
FIESTA Esther Williams, Ricardo Montalban	23	36	41	0	G
FRAMED Glenn Ford, Janis Carter	0	70	30	0	FG
FEAR IN THE NIGHT DeForest Kelley, Kay Scott	0	46	27	27	F
GHOST AND MRS. MUIR Gene Tierney, Rex Harrison	28	48	16	8	G
GREAT EXPECTATIONS John Mills, Valerie Hobson	81	13	6	0	E
HIGH BARBAREE June Allyson, Van Johnson	25	45	25	5	F
HOMESTRETCH Maureen O'Hara, Cornel Wilde	21	43	36	0	FG
HONEYMOON Shirley Temple, Guy Madison	0	25	56	19	F
THE HUCKSTERS Clark Gable, Deborah Kerr	25	44	19	12	G
IMPERFECT LADY Ray Milland, Teresa Wright	0	42	47	11	FG
IT HAPPENED IN BROOKLYN Frank Sinatra, Kathryn Grayson	18	34	41	7	F
IT HAPPENED ON FIFTH AVENUE Ann Harding, Don Defore	38	46	8	8	F
IVY Joan Fontaine, Patric Knowles	17	42	33	8	G
LADIES MAN Eddie Bracken, Cass Daley	6	48	40	6	F
LADY IN THE LAKE Robert Montgomery, Audrey Totter	19	58	19	4	G
LATE GEORGE APLEY Ronald Colman, Peggy Cummins	40	44	12	4	G
THE LOCKET Laraine Day, Robert Mitchum	21	55	17	7	F
LOVE AND LEARN Jack Carson, Martha Vickers	0	20	60	20	F
MACOMBER AFFAIR Gregory Peck, Joan Bennett	10	61	21	8	G
MIRACLE ON 34TH STREET Maureen O'Hara, John Payne	63	32	3	2	GE
MOSS ROSE Victor Mature, Peggy Cummins	6	65	23	6	FG
MR. DISTRICT ATTORNEY Marguerite Chapman, Dennis O'Keefe	0	38	45	17	F
MY BROTHER TALKS TO HORSES Jackie Jenkins, Edward Arnold	12	45	12	31	F
MY FAVORITE BRUNETTE Dorothy Lamour, Bob Hope	15	55	27	3	G
NORA PRENTISS Ann Sheridan, Kent Smith	24	40	24	12	G
ODD MAN OUT James Mason, Kathleen Ryan	54	30	13	3	GE
PERILS OF PAULINE Betty Hutton, Billy De Wolfe	32	42	26	0	E
POSSESSED Joan Crawford, Van Heflin	21	43	36	0	FG
PURSUED Robert Mitchum, Teresa Wright	37	60	3	0	F
RAMROD Veronica Lake, Joel McCrea	0	30	45	25	G
RED HOUSE Edward G. Robinson, Judith Anderson	31	55	11	3	G
SINBAD THE SAILOR Maureen O'Hara, Douglas Fairbanks, Jr.	11	53	31	5	G
SMASH-UP Susan Hayward, Eddie Albert	18	45	21	16	G
STAIRWAY TO HEAVEN David Niven, Kim Hunter	68	28	2	2	G
STALLION ROAD Ronald Reagan, Alexis Smith	5	70	20	5	FG
SUDDENLY IT'S SPRING Paulette Goddard, Fred MacMurray	9	50	38	3	FG
THAT WAY WITH WOMEN Sydney Greenstreet, Martha Vickers	0	29	64	7	F
TRAIL STREET Randolph Scott, Anne Jeffreys	0	53	20	27	F
TWO MRS. CARROLLS Humphrey Bogart, Barbara Stanwyck	8	42	33	17	FG
THE UNFAITHFUL Ann Sheridan, Lew Ayres	43	38	19	0	F
UNDERCOVER MAISIE Ann Sothern, Barry Nelson	0	33	61	6	F
THE YEARLING Gregory Peck, Jane Wyman	68	28	4	0	GE

The returns aren't in

When more returns are received from CU subscribers, these movies will be rated; until then, here are critics' scorings:

Picture & Stars	*Critics' Opinions*
THE ADVENTURESS — Deborah Kerr, Trevor Howard	E
BACHELOR AND THE BOBBY-SOXER — Shirley Temple, Cary Grant	GE
BLACK NARCISSUS — Deborah Kerr, David Farrar	G
BRUTE FORCE — Burt Lancaster, Hume Cronyn	FG
COPACABANA — Groucho Marx, Carmen Miranda	F
CROSSFIRE — Robert Young, Gloria Grahame	E
CRY WOLF — Barbara Stanwyck, Errol Flynn	F
DEAD OF NIGHT — Googie Withers, Michael Redgrave	E
DISHONORED LADY — Hedy Lamarr, Dennis O'Keefe	F
DUST BE MY DESTINY — John Garfield, Priscilla Lane	FG
FRIEDA — Mai Zetterling, David Farrar	GE
GREEN FOR DANGER — Alastair Sim, Sally Gray	G
GUNFIGHTERS — Randolph Scott, Barbara Britton	F
GUILT OF JANET AMES — Melvyn Douglas, Rosalind Russell	G
THE GUILTY — Bonita Granville, Don Castle	F
I KNOW WHERE I AM GOING — Wendy Hiller, Roger Livesey	G
I WONDER WHO'S KISSING HER NOW — June Haver, Mark Stevens	FG
LIFE WITH FATHER — William Powell, Irene Dunne	GE
MOTHER WORE TIGHTS — Betty Grable, Dan Dailey	FG
REPEAT PERFORMANCE — Joan Leslie, Louis Hayward	G
ROOSEVELT STORY — Franklin Delano Roosevelt	GE
SECRET LIFE OF WALTER MITTY — Danny Kaye, Virginia Mayo	GE
THEY WON'T BELIEVE ME — Robert Young, Susan Hayward	G
THIS HAPPY BREED — Celia Johnson, John Mills	E
TROUBLE WITH WOMEN — Ray Milland, Teresa Wright	F
WELCOME STRANGER — Bing Crosby, Barry Fitzgerald	G

Older but still active

These releases may still be showing in your community; here is how CU subscribers have rated them in the past:

Picture & Stars	*% Rating*
BEGINNING OR THE END — Audrey Totter, Robert Montgomery	35 G
BRIEF ENCOUNTER — Celia Johnson, Trevor Howard	80 E
CARNIVAL IN COSTA RICA — Dick Haymes, Vera-Ellen	42 F
THE CHASE — Robert Cummings, Michele Morgan	45 G
EASY COME, EASY GO — Barry Fitzgerald, Diana Lynn	46 G
HENRY V — Laurence Olivier	97 E
HUMORESQUE — Joan Crawford, John Garfield	36 E
IT'S A WONDERFUL LIFE — James Stewart, Donna Reed	70 E
IVAN THE TERRIBLE — Cherkassov, Tselikovskaya	38 E
MAGNIFICENT DOLL — Ginger Rogers, Burgess Meredith	42 E
MARGIE — Jeanne Crain, Alan Young	55 G
NOTORIOUS — Ingrid Bergman, Cary Grant	50 G
NOTORIOUS GENTLEMAN — Rex Harrison, Lilli Palmer	42 G
OPEN CITY — Aldo Fabrizi, Anna Magnani	76 E
PERFECT MARRIAGE — David Niven, Loretta Young	46 F
RAZOR'S EDGE — Tyrone Power, Gene Tierney	34 E
SEA OF GRASS — Spencer Tracy, Katharine Hepburn	50 G
SECRET HEART — Claudette Colbert, Walter Pidgeon	52 G
SHOCKING MISS PILGRIM — Betty Grable, Dick Haymes	57 F
THE SHOW OFF — Red Skelton, Marilyn Maxwell	40 F
STRANGE WOMAN — Hedy Lamarr, George Sanders	60 G
SWELL GUY — Sonny Tufts, Ann Blyth	52 G
13 RUE MADELEINE — James Cagney, Annabella	50 G
TILL THE CLOUDS ROLL BY — Judy Garland, Robert Walker	51 G
WELLDIGGER'S DAUGHTER — Raimu, Fernandel	70 E
WICKED LADY — James Mason, Margaret Lockwood	35 F

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